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Original Articles

HEMOCHROMATOSIS*

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Hemochromatosis may be defined as a chronic disease, characterized pathologically by the widespread deposit of pigment, and sclerosis in the liver, pancreas, lymph nodes, and other organs, and clinically by pigmentation of the skin, cirrhosis of the liver, and frequently by diabetes. The pigment is of two kinds: one, hemosiderin, which gives the chemical reactions for iron; and the other, hemofuscin, which does not. The diabetes, when present, occurs as the result of injury to the pancreas. It is usual in well-marked cases, and to this group the term "bronze diabetes" is applied.

The disease was described and named by von Recklinghausen in 1889, although there had been cases observed earlier. It is a rare condition. In 1921 Blanton and Healy[3] found 81 cases in the literature; 4 more cases[6, 11] have been reported since and, in addition, there have been 9 other cases found by Dr. F. B. Mallory† at autopsy in the past year, making a total of 94 cases.

But hemosiderin deposit in the liver is not infrequent. In 4507 autopsies at the Boston City Hospital, of which 1057 were in children, Dr. Mallory[13] reports 94 cases of hemosiderin in the liver alone or associated with hyalin. Of these, four were of sufficiently general distribution to be classed as hemochromatosis.

Case Report: Mr. C. L., a grocer, aged 42, born in Canada, was admitted to the Clinic of Dr. M. F. Fallon, Sept. 20, 1923, complaining mostly of abdominal pain.

Family History: Father died of paralysis, also had liver trouble of unknown nature. Mother died of apoplexy. Five sisters and one brother living and well. One sister died of diabetes and one of tuberculosis. Two brothers and five sisters died in infancy, cause unknown.

Married 15 years. Wife and 7 children living and well. One child, aged 12, has had rheumatism since the age of 4 months. One child died at 4 months of diarrhoea.

Past History: Had "rheumatism" of feet 16 years ago; not incapacitated. Influenza 3 years ago; sick 5 weeks. Occasional mild sore throat. Chronic catarrh for years. Otherwise has been well.

C. R.: No precordial pain or palpitation; no edema; no fever, chills, or night sweats.

G. U.: Five years ago had inflammation of the bladder with frequency and dysuria for five days. Nocturia for the past year. Venereal denied. Has used alcohol moderately at long intervals, never to excess.

Present Illness: Fifteen months ago, noticed dark color of skin; thought it was due to sunburn. About that time, began to have a severe cough and irritation of the throat. Cough occurred in paroxysms, frequently resulting in vomiting. No sputum. Never hemoptysis. About ten months ago, began to have a dull, dragging pain in epigastrium and right upper quadrant, not related to food. Noticed then that upper abdomen seemed swollen. About that time, stools were light colored for a few weeks and he had pruritus, especially of the legs. Seven months ago, stopped work because of weakness, pain, and cough. Six months ago, cough cleared up, following tonsillectomy and removal of uvula. For the past three months, weakness has been increasing and he has had slight dyspnea on exertion. Appetite is good; has occasional feeling of distention and raising of gas after meals. Bowels regular. Has had nocturia for one year; no polyuria or polydipsia. Best weight 161 lbs., three years ago. Usual weight for the last two years, 145 lbs. Present weight, 134 lbs.

Physical Examination: Well-developed, well-nourished man, not acutely sick. There is a light brownish pigmentation over the neck, face, hands, forearms, and legs. No pigmentation of the mucous membranes. Several pigmented scars on legs, said to be from scratching. The abdomen is slightly distended. The liver is greatly enlarged; extends to level of umbilicus entirely across the abdomen. It is hard, smooth, and non-tender. The spleen is readily palpable. B. P. 110/80. Physical examination otherwise negative.

Examination of single specimens of morning urine showed no abnormality, but an afternoon specimen showed sugar; and 24-hour amounts, with patient on house diet, showed from .7% to 1.5%, amounting to 5-12 gms. glucose; stools normal; R. B. C. 4,320,000; W. B. C. 8,800; Hgb. 70 per cent.; smear and differential normal. Fragility of r. b. c. normal. Blood sugar 140-160 mg. per 100 c.c.; N. P. N. 28 mg. per 100 c.c. Blood and spinal fluid Wassermann negative. Basal metabolism normal. Phthalein excretion, 2 hrs., 80 per cent.

A piece of skin excised from the dorsum of the hand was examined by Dr. F. B. Mallory. Pathological Report: "Sections of the skin received from you show a moderate degree of iron deposit around all the coil glands and also in a few cells in the subcutaneous tissue. Diagnosis: Hemosiderosis of the skin. This, in connection with the other symptoms, is diagnostic of hemochromatosis."

For the past four months, patient has been on a diet of Cbh. 159, P. 84, F. 135: Cal. 2187. He tests his urine and has been sugar free except on a few occasions when he knows he has overstepped his diet. He feels better, has gained about 6 lbs., and is able to do some of his work. He thinks his color is getting darker.

The etiology of this disease is obscure and has been the subject of much speculation. The amount of iron that accumulates in the body in this condition is remarkable, reaching in some cases to one hundred times the normal amount. There is evidently no excessive blood destruction because anaemia does not occur to any extent. The earliest writers supposed the diabetes to be primary and the pigmentation secondary. Later investigators believed cirrhosis of the liver to be primary and the pigmentation occurring as a result. The objection to this theory is the frequency with which cirrhosis of the liver occurs with the absence of pigmentation. Another idea was that the condition was due to an unknown toxin, causing the pigment deposit with cirrhosis resulting.

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*Paper read at meeting of Worcester District Medical Society, Jan. 9, 1924.

†Personal communication.

FIG. 1.—Surface view of hemochromatosis liver on section showing islands of non-pigmented and slightly pigmented regenerated liver cells.

Parker, in 1903, advanced the theory that there was a failure in the normal excretion of iron from the body, and in two cases in which the iron metabolism was studied,[13, 17] retention of small amounts of iron was found.

Recently, the very interesting work of Dr. F. B. Mallory, in producing hemochromatosis experimentally in animals by chronic poisoning with copper, has presented a new aspect for consideration, and Dr. Mallory has had at least one patient in whom there was definite exposure to copper poisoning.

In this case, we could obtain no history of exposure to copper poisoning, but the widespread use of copper in cooking utensils makes it difficult to rule it out.

The pathology of this condition has always been of great interest. Grossly, the liver presents the most striking appearance. It is enlarged in 95 per cent. of the cases,[3] sometimes reaching an enormous size. It is of yellowish or chestnut brown color. The pancreas is also enlarged and presents the same brown color. The abdominal lymph nodes, especially those draining the liver and pancreas, are large and deep brown in color. In some cases brownish pigmentation can be seen in the heart muscle, the adrenals, the mucosa of the intestine, the spleen, testicles, and other organs.

The pigmentation in the spleen is slight, however, and the enlargement, when it occurs, is secondary to cirrhosis of the liver and portal obstruction.

Microscopically, in the liver there is seen massive deposits of hemosiderin in the endothelial cells and liver cells, especially around the periphery of the lobules; also in the smooth muscle cells and fibroblasts of the blood vessels, in the epithelium of the bile ducts, and in endothelial leucocytes, which will be found in large number filled with hemosiderin, around the blood vessels.

FIG. 2.—The primary cell lesion of the liver in hemochromatosis: hemosiderin granules (derived from hemofuscin) packed in the liver cells close to the bile capillaries. Zenker fixation. Stain, alum hematoxylin and ammonium sulphide. × 500.

Granules of hemofuscin are found especially in smooth muscle cells of blood vessels, and in fibroblasts around the large vessels and ducts.

There occur also necrosis of liver cells, areas of regeneration, and proliferation of fibroblasts and resulting sclerosis.

In the pancreas the process is essentially the same; the pigment is deposited in the cells of the acini and islands. There result necrosis and replacement by fibrous tissue. The glands, however, are affected much more than the islands.[18]

In the heart, the pigment is deposited in the muscle fibers and endothelial cells of the capillaries. It has been noted that in the kidney, the pigment is deposited principally in the distal convoluted tubules and ascending limb of Henle's loop.[10]

The mucous membranes of the stomach and intestines may also show marked deposits of hemosiderin, especially in the gland cells.

In the skin, the pigment is found in the epithelial cells of the sweat glands and surrounding fibroblasts and the subcutaneous fat cells. The pigmentation of the skin is probably due more to increased melanin resulting from adrenal damage than to the deposit of hemosiderin.

Pigment deposits have also been observed in the cells of the thyroid, parathyroid, testicle, prostate, seminal vesicles, salivary glands, bone marrow, ependymal cells of the choroid plexus, and ganglion cells of the sympathetic and central nervous system.

Probably the best description of the pathology of the disease is in the article on Experimental Pigment Cirrhosis by Mallory and his associates,[13] and according to their interpretation of the pathology, there occurs primarily a deposit of pigment of hemoglobin origin in the various cells. The pigment is hemofuscin, which, in most of the cells, is changed to hemosiderin, the latter being the iron reacting pigment.

Ultimately, the necrosis of these parenchymatous cells occurs and the pigment is taken up by endothelial leucocytes. Regeneration of some of the cells takes place, which have the power of regeneration. Secondarily, there occurs sclerosis from the death of the parenchymatous cells and the contraction of the fibrous stroma. This process is most marked in the liver and pancreas, giving the clinical signs of cirrhosis of the liver and diabetes mellitus.

Symptomatology: It is a disease of males almost exclusively. Only one authenticated case has been reported in a woman.[1] The majority of cases occur in the fourth and fifth decades. The onset is insidious. It may date from an acute infection. Frequently the first manifestations are the diabetic symptoms. Usually there is progressive asthenia and loss of weight. Enlargement of the liver is almost constant and secondary enlargement of the spleen occurs in a considerable proportion of the cases. There has been noted a relatively greater enlargement of the left lobe of the liver in several cases. The pigmentation varies a great deal. In the cases reported, it has ranged from light brown to deep, bluish black; the slight metallic luster is characteristic.

The distribution of the pigmentation is of importance. It occurs on the face, neck, backs of the hands and forearms, and the extensor surfaces of the legs. It is sometimes pronounced about the nipple and areas of natural pigmentation. There is rarely pigmentation of the mucous membranes, unlike Addison's disease. Even in well-marked cases, the pigmentation may be slight and easily overlooked. Very frequently it has not been noticed by the patient.

Diabetes, when it occurs, is usually severe and dominates the picture, although in our case the diabetes is mild. Examination of the blood shows nothing characteristic.

Diagnosis: In the presence of the classical triad of symptoms—pigmentation of the skin, cirrhosis of the liver, and diabetes—the condition is readily recognized. The chief differential diagnosis is from Addison's disease, which is suggested by the pigmentation, asthenia, and loss of weight. In fact, it would seem possible that these symptoms might be due to adrenal insufficiency, as the adrenal is often involved in this condition. The enlargement of the liver, however, is not part of Addison's disease.

Of course, the diagnosis depends on the demonstration of hemosiderin in the tissues, and for this purpose a piece of skin is excised from a pigmented area and examined for hemosiderin, which is found especially in the cells of the sweat glands. In this, care must be taken to avoid localized areas of pigmentation, scars, and injured areas, where hemosiderin might occur as the result of old hemorrhage. It is also possible at times to find intracellular hemosiderin in the urinary sediment,[23] which would be valuable for diagnosis, having ruled out pernicious anaemia, hemolytic jaundice, and hemorrhage from the urinary tract, as these conditions may give rise to urinary siderosis.

As regards prognosis, the disease has been uniformly fatal, but with recent advances in the treatment of diabetes a more hopeful outlook of prolonging life may be entertained.

In an analysis of twelve cases, reported by seven different authors, [3, 7, 8, 10, 12, 19, 22, 24] in which good clinical records were available, the average duration of the disease was one year—the longest three years, and the shortest, 21 days from the onset of the symptoms.

Of these twelve cases, six died of diabetic coma, three of acute infections, one of tuberculous peritonitis, one of pulmonary edema, and one of primary carcinoma of the liver.

The relative frequency of primary carcinoma of the liver in this condition is of considerable interest. Four cases have been mentioned in the literature, within the last three years.[5, 6, 13]

Of these twelve cases, but two had ascites and, in fact, portal insufficiency occurs infrequently in this disease, probably because of the relatively short duration.

Thus far, there have been no authentic cases reported that were treated by insulin. Our patient's diabetes is readily controlled by diet and is not yet severe enough to require insulin, but if the diabetes can be controlled in this disease, it will probably add considerably to the expectancy of life.

The only definite treatment is that directed to the diabetes. Investigation should also be made with a view to discovering possible exposure to copper poisoning.

I wish to express my thanks to Dr. F. B. Mallory for his kindness in making the pathological examination and other valuable assistance in this case, and also for the illustrations of pathological sections.

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ONE REASON WHY ALCOHOLIC ABUSE AGGRAVATES NEUROSYPHILIS

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THE following case report, with the illustrations and comments, was presented at a meeting of the Massachusetts Assistant Physicians' Association in January, 1923, and it has seemed since that its publication might be of interest. Since then, also, there has appeared a report[1] of a statistical study of general paresis in 88 State hospitals for 1921, by Edith M. Furbush, of the National Committee for Mental Hygiene, in which there was found a larger percentage of intemperance among persons admitted with this form of mental disease than for any other form except alcoholic psychosis.

A man, 35 years old, was admitted to Danvers State Hospital February 20, 1922, completely disoriented, restless and slovenly. For 14 days before admission he had suffered from insomnia, visual hallucinations and terrorizing persecutory delusions. In the past he had been excessively alcoholic, and, according to both his own statement and that of his physician, he had been drinking heavily for a long period. Two weeks before his admission he had had two convulsions, during which he became rigid and frothed at the mouth, these being the only occurrences of a convulsive nature during his life, and probably indicative of the onset of cerebral oedema. On the day after admission he died in collapse, following his continued violent delirium, having failed to respond favorably to any sedative treatment.

Physical examination was limited by the violent delirium, but as far as done showed nothing more than the usual physical accompaniments of delirium tremens, together with slightly perceptible traces of albumen and sugar and some granular casts in the urine.

Autopsy was performed within one hour after death, and showed multiple abrasions of the skin, dilated pupils, a few old peritoneal adhesions, central lobular necrosis of the liver, slight chronic nephritis and anaemia of the lungs. The stomach was filled with dark granular fluid, and in the gastric and intestinal mucosa were many petechial haemorrhages. The scalp, cranium and dura were negative; the brain was soft and very large, measuring 186 mm. by 140 mm. The average measurements of the normal adult brain, as given by Villiger, are 160 mm. to 170 mm. in length and 140 mm. in the greatest transverse diameter. The cranial nerves and vessels, and sections of the brain and cord show nothing of pathological interest except the swelling and oedema. This is a so-called "wet brain."

The case clinically was considered to be one of delirium tremens.

Microscopic examination of the brain furnished most interesting data. Here the pia is oedematous, distended, and contains scattered phagocytes and rare polymorphonuclear leukocytes. In the cortex the nerve cells in the small and medium pyramidal cell layers are shrunken with deeply stained cytoplasm containing many vacuoles, no Nissl granules, and small, deeply staining, irregular nuclei, similar to the "sclerosed cells," as described and illustrated by Alzheimer[2] in his classic on the Pathology of General Paresis. The small blood vessels in the parenchyma of the brain are increased in number, and frequently surrounded by pigmented phagocytes. The *neuroglia* is greatly increased in amount, as shown in these illustrations, in which I have arranged for comparison micro-photographs of sections from a case of general paresis, this case of delirium tremens, and a case of manic depressive psychosis,—the last case representing, for purposes of comparison, the normal brain as seen in these stains. The micro-photographs are self-explanatory.

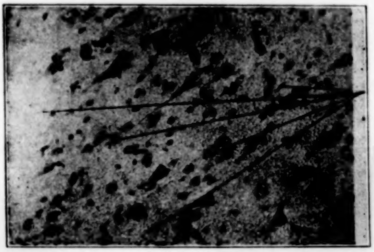
This gliosis, or increase in the neuroglia, is diffuse in distribution, and of an intermediate regressive type, having marked resemblance to that seen in general paresis, both in character and distribution, except that in our case of delirium tremens it is more marked in the white substance, where, also, the glia cells, although they contain differentiated fibrils, also show more stained cytoplasm than in the general paresis and are rather of a "protoplasmatic" type. In the nuclear stain in this case (Thionin), can be seen throughout the cortex many rod cells (Nissl's "staebchenzellen"), which are seen as very elongated nuclei with small and usually branching threads of cytoplasm, and which, though their origin is doubtful, are considered to be partly a modified form of glia and partly modified mesodermal elements originating from the vessel walls. These, as you know, were once considered characteristic of general paresis, but are now known to occur in several other conditions. These, also, in our case of delirium tremens are diffuse in distribution, and while they do not seem as plentiful as in most cases of general paresis, nevertheless they constitute one of the most prominent things in the section, and, as can be seen in the illustration, are quite comparable with those in the brain in the case of general paresis. Dr. U. Noda published a study of rod cells in 1921, and describes one case of delirium tremens with conditions corresponding to these.[3]

General Paresis. Autopsy. No. 2291.

Perivascular infiltration

"Rod" cells

Delirium Tremens. Autopsy. No. 2269.



"Rod" cells

Manic-depressive Psychosis. Autopsy. No. 2278.

Practically normal appearance

No "rod" cells

Cortex. Pyramidal cell layer. Thionin stain (designed to stain particularly "nuclear" structures). Note similarity of cortex in general paresis and delirium tremens as regards "rod" cells.

General Paresis. Autopsy. No. 2280.

"Spider" cells

Delirium Tremens. Autopsy. No. 2269.

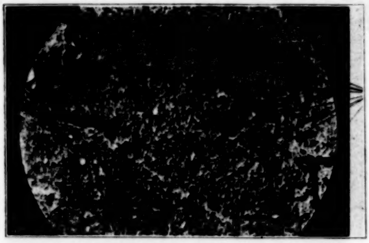
"Spider" cells

Manic-depressive Psychosis. Autopsy. No. 2278.

Normal glia cells

Cortex. Molecular and small pyramidal cell layers. Cajal's gold impregnation method for glia (designed to show particularly "spider" glia cells which stain black on a light red background. Note number and size of these in general paresis and delirium tremens, while in the more normal condition they are few and small.

General Paresis. Autopsy. No. 2291.



"Protoplasmic" glia cells

Delirium Tremens. Autopsy. No. 2269.

"Protoplasmic" glia cells. Some of these approach the "spider" type

Manic-depressive Psychosis. Autopsy. No. 2278.

Practically normal appearance
No glia cells similar to those above labeled

White matter at base of cortex. Alzheimer-Mann stain (designed to stain "amoeboid" and "protoplasmic" glia cells). These large glia cells and "spider" cells, when they take this stain, are always pathological.

It appears to be a universal opinion that alcoholism is frequently concerned in the genesis of general paresis, and that the general paretic who persists in indulging in alcoholic beverages has a poorer prognosis than the one who avoids alcoholic beverages, and it is interesting to note some of the opinions of older authors in connection with this. For instance, in 1906, the Italian psychiatrist, Bianchi, says, "We cannot fail to recognize in the abuse of alcoholic drinks a genetic agency of progressive paralysis almost equal in power to syphilis," and he quotes many statistics in illustration of this. And more recently, in the last edition of Church and Peterson's Text-book of Nervous and Mental Diseases, we read, "The part played by alcohol is somewhat uncertain. . . . Very likely the rôle of alcohol is that of reducing vitality and general resistance, thus establishing a better soil for the action of the luetic germs."

A further similarity between alcoholism and general paresis is known to you in the so-called "alcoholic pseudo-paresis." A still further similarity is the occurrence of a so-called "paretic colloidal gold curve" in the spinal fluid of some cases of acute alcoholism, which quickly disappears when the acute symptoms subside. I have seen one such case in this hospital, and as I recall conversations with others who are in the habit of examining spinal fluids, it is not an extremely uncommon finding. Dr. Rawlings, in 1919, published the cerebrospinal fluid findings in 498 psychiatric cases, including thirty inebriates, found, among the thirty, no "paretic curves," but twelve so-called "syphilitic curves;" only two of the thirty apparently were acute, one delirium tremens and one hallucinosis, and these had "syphilitic" curves.[4]

I am exhibiting here, for your interest, a tabular comparison of the microscopical characteristics of general paresis, as described by Nissl and universally recognized, and the findings in this case of delirium tremens, which are also those described in Dr. Noda's case, and I would simply call your attention to the similarity in the reaction of the cerebral tissue to the two invaders, except for the absence of the exudate of plasma cells, lymphocytes and mast cells in the alcoholics.

Delirium Tremens	*General Paresis*
Meningeal Oedema	Meningeal Exudate of plasma cells, lymphocytes and mast cells. Perivascular exudate of plasma cells, lymphocytes and mast cells.
Diffuse gliosis.	Diffuse gliosis.
Rod cells.	Rod cells.
Vascular proliferation.	Vascular proliferation
Degeneration of nerve cells.	Degeneration of nerve cells.

Incidentally, I find that Kellogg, in 1897, in his text-book, and Tanzi, in 1909, in his text-book, both speak of proliferation of the neuroglia and degeneration of the nerve cells; and Bianchi in 1906 makes this statement concerning the pathology of alcoholism, "In some cases the alterations closely resemble those of senile dementia and dementia paralytica."

This case is of interest because the similarity of anatomical changes gives to the mind of the psychiatrist who is in the habit of seeking reasons why things happen a more definite basis of speculation on the aggravation of general paresis by alcoholic abuse than the theory that the rôle of alcohol is merely "that of reducing vitality and general resistance."

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Rejections for Life Insurance.—It has been estimated that 80 per cent. of the rejections of applicants for life insurance was because of diseases of the heart, blood vessels and kidneys.

MEDICAL SUPERVISION OF ATHLETICS AT HARVARD*

BY T. K. RICHARDS, A.B., M.D., BOSTON

It is not the purpose of this paper to discuss in detail the treatment of athletic injuries but rather to outline the scheme of organization for the medical supervision of athletics at Harvard, with special attention to football, hoping that others interested in taking care of athletes may find useful the plan of organization which has proven its worth at Harvard.

To bring all matters pertaining to the health of the University under one head, each medical man in charge of a sport, as well as the sick-call man or medical adviser of the University, is subordinate to the Professor of Hygiene. Thus all responsibility rests in one office. The man in charge of football, happening to be a surgically trained man, also acts as consulting surgeon for the other sports and is available once a week at the office of the Professor of Hygiene for his surgical opinion on any case coming through this office in the customary daily routine. Under this plan the doctor in charge of any sport is responsible on the field and accountable to the Professor of Hygiene.

So much for the general scheme, and now to see how the machinery actually works. When the men report for football practice in September each has had a complete physical examination by the Department of Hygiene and, therefore, the football doctor assumes they are physically fit as to heart, lungs, etc. Any condition which requires a surgical opinion is left to the doctor at the field. Thus when the squad reports for its first practice the doctor asks to see personally any man, who, during the summer vacation, has had any major surgical operation; any bone injury; any joint injury; or any case of boils or skin disease.

All cases of herniae and appendicitis must be at least two months post-operative before being allowed to play football, and they must not show any evidence of weakness in the respective scars. If there has been any extensive abdominal operation—and by this is meant such things as drained appendices, etc.—no competitive athletics is allowed for six months or a year.

It is important to see any case of bone or joint injury for two reasons; first, to try and determine whether or not the given injury will lessen the man's efficiency to his team; second, to prevent further injury by special apparatus, adjustment of pads or even by refusing to allow the man to participate in the sport at all.

Boils and skin diseases, especially the so-called red flap or epidermophytosis, may prove to be serious and disabling factors in any athletic squad, so it is the policy at Harvard to treat these conditions largely by preventing their getting started. All skin conditions are referred to a competent skin man for his opinion as to the infectiousness of any lesion. If the case is infectious the man is not allowed to join the squad until this stage is past.

To prevent the appearance and spread of infectious skin diseases all men are required to wear clean underclothing every other day (any man who seems to have a predisposition for red flap must wear clean underclothes every day); all "jockey straps" are to be worn outside of the drawers because it is believed that constant irritation or trauma plays a considerable part in the etiology; clean towels are supplied every day and no cake soap is allowed, instead liquid or flake soap, so that it will be impossible for one man to use soap that has been used by anyone else. All towels, underclothes and "jockey straps" are boiled before being sent to the laundry as it has been found that the microörganism of tinea cruris may survive a steam laundry.

In case a man develops red flap during the season, he is immediately barred from further participation in athletics until he ceases to be infectious. All his athletic clothes are burned and his locker thoroughly cleaned with some powerful disinfectant.

Individual drinking cups or drinking fountains are used both on the field and in the Locker Building. All the toilets and the shower rooms are scrubbed daily with a disinfectant.

With the idea of possibly assisting in the prevention of epidemics of colds each man opens the windows of his room fifteen minutes before going to bed and during this interval takes a short walk.

Training tables are becoming more and more matters of discussion as to their true worth and importance. At Cambridge it is felt that "a man going stale" is as much a psychological condition as a physical one, and, therefore, anything that will help to relieve the monotony of the situation is desired. The food must be attractively served. Tablecloths or respectable bare tables and napkins should be used, not oilcloth coverings and paper napkins.

The diet should be balanced—plenty of green vegetables, salads with dressing, etc., with the idea of trying to get away from the old belief that raw beef and baked potatoes were the only foods a football man should eat.

Athletes, just as men in the army, crave sweets. Consequently, rather than let the men satisfy this longing with candy, sodas, and what not of uncertain quality and vintage, or have this appetite go unsatisfied, individual dishes of clean, wholesome chocolates or jams and marmalades are put on the tables at each meal. This satisfies the want and, incidentally, supplies a food that is readily burned. Twelve men will ordinarily eat two large vegetable dishes of jam at each meal.

In the fall there are about seven hundred men engaged in athletics on Soldier's Field. This number includes both Freshmen and Varsity; football, track, soccer, lacrosse and baseball. To handle the number medically there are two doctors (with a third available to take Freshman teams away on trips), two highly trained masseurs, four rubbers and one trainer always on hand. The doctor is sole judge of a man's fitness to play. Coaches and trainers abide by his decisions. Likewise the College Office accepts the football doctor's say-so when a man is unable to attend his classes, because no man who can play football is so physically disabled that he cannot fulfill his academic engagements.

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*Read before the annual meeting of the Student Health Association of America, Jan. 2, 1924, at Cincinnati, Ohio.

Practice begins at two-thirty, consequently the medical staff is on hand at two. All men who are injured report to the doctor daily. The progress of a given injury is noted and treatment prescribed accordingly. At two-thirty the injury list for each squad is sent to the respective head coach. This list contains the injured man's name, the injury, whether or not he can play, and when he will be ready to play. Thus the coach knows at the beginning of practice exactly what men are not available for work.

To help keep the different injured men in somewhere near physical condition, exercises are prescribed which do not involve the use of the injured part. For example, a man with a "Charley Horse" may use the chest weights and pass a ball but cannot run, while a man with a lame shoulder may run but not use the chest weights. So the Injury List may contain the names of men who, although they are not available for everything the practice includes, may still take part in certain things without running the danger of further increasing the given injury.

Any man injured during practice is sent to the doctor immediately. The latter decides whether or not he may continue practicing. If not, treatment of the injury is begun at once. This is all-important for a speedy recovery, as a slight injury, untreated, may develop into one that will take weeks to get well.

On the field the doctor has a chance to see injuries in a way the average practitioner never does, and it is very striking how unlike the textbook descriptions fresh injuries are. As occasion may arise, other medical men are frequently called in consultation; for instance, neurologists, otologists, x-ray men, etc.

There is one fundamental rule from which there is no exception. Any man who has been knocked unconscious, or any man in whom there is any question of head injury, goes to the University Infirmary for the night to forestall the danger of overlooking a delayed cerebral hemorrhage. At the Infirmary the following are routine orders:

Rest in bed
Hourly pulse
Soft solid diet
Epsom salts one half ounce

Report:

1. Dropping pulse below 50
2. Any convulsion or paralysis
3. Dilated and unequal pupils
4. Projectile vomiting
5. Loss of consciousness

To insure the proper coöperation between all those concerned with the development of any athletic team, the doctor in attendance should be included at all coaches' meetings where he may answer questions relative to any man's ability to perform 100 per cent. efficient—for a second-string man right is better than the greatest star who ever lived crippled.

At the beginning of the practice before the day of a game the Injury List contains the names of those men who are not available for the next day. During a game it is the doctor who decides on a man's physical fitness. If he says a man shall come out of the game, that settles the question. There is no argument.

After a game every man who has taken part in the contest is required to report to the doctor for decision as to the extent of any injury and its treatment over the week-end.

At the end of each season there are sure to be more or less injuries which are apt to remain untreated or allowed to get well by themselves. To insure proper treatment the football doctor is available for consultation at the office of the Department of Hygiene one afternoon each week. In this way men can be guided in corrective exercises and physical therapeutics in general through the Department of Physical Training, whose duty it is not only to provide athletics for all, but to see that injuries received in sports during the active season are not neglected during the calm which follows the storm.

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OLD VENTRAL HERNIA

BY BENJAMIN BRABSON CATES, M.D., KNOXVILLE, TENN.

There is a certain element of danger in operating for old ventral hernia that may in a measure be eliminated, if one considers the sequences of giving way of the belly wall allowing the viscera to protrude, and the diaphragm a wide excursion with a corresponding greater expansion of the lungs and lowering of the plane of the heart.

Now, it may be assumed that in operating on old ventral hernias when the belly muscles are drawn together in an attempt to obliterate the opening in the belly wall, and restore normal conditions, there is a disturbance of the equilibrium of the viscerae in the thorax and abdomen caused by the sudden curtailment of the excursions of the diaphragm.

This in turn curtails the wide expansion of the lungs (prevents proper aeration of the blood), shocks the heart and favors venous stasis.

Such conditions occurring in a patient, following operation for ventral hernia, may be important factors predisposing to pneumonia and, possibly, embolism.

Granting, then, such a postulate is plausible, a certain hazard in operating on old ventral hernias may be minimized by restoring, as far as possible, the normal pre-operative relations of the heart and lungs, and the normal excursions of the diaphragm before subjecting a patient to operation.

This may be done by gradually diminishing the patient's waist line with broad adhesive strips, reaching from one loin to the other and extending from the pubis to the ensiform cartilage. These strips, which are imbricated, are changed every day or so, and the waist line stortened each time the plaster is changed. This is kept up until a point is reached satisfactory to the surgeon.

When the zero point is reached the patient wears the plaster at that point until he ceases to complain of discomfort and shortness of breath. This requires from ten to fourteen days. Such patients do a lot of kicking at first, but when the reasons for such preliminaries are explained to them they settle down and become reconciled.

That there is merit in the plan of restoring the normal pre-operative status of the thoracic and abdominal viscerae; also, that the plan of bringing the belly muscles into the position in which they are to remain post-operatively, is feasible, may be certified to in the following report of some cases as occurring in my experience.

Case 1. Lad, white, aet. 12 or 14, had ileus from a gangrenous Meckel's diverticulum which attached its free end to the anterior belly wall. The wound was drained and there was colon baccillus infection with considerable necrosis of the fascia of the muscles, with considerable diastasis of the edges of the wound; after sloughing and suppuration had ceased, and after treating the belly with adhesive strips, I closed the wound with secondary sutures. The wound healed rapidly and the boy, now a man, has had no trouble for five or six years.

Case 2. Large fat man, white, aet. 50, lumberman and farmer, had gangrenous appendix which was drained. He left hospital against my advice and before the wound was closed.

Two or three years later he returned for operation with an enormous ventral hernia. This hernia was tender on pressure and pained him all the time. The diastasis at middle of incision was about three inches. I kept him in bed for about two weeks before operating, on a reduced diet, while I gradually took a reef in his waist band with adhesive strips. When it came to operate on him anyone who has operated for ventral hernia can visualize what I found. There was omentum, adherent guts, and extensive adhesions all over the sac.

Nevertheless, the operation was completed and the wound closed with overlapping flaps of fascia. I reapplied the adhesive plaster. He went through the operation in good shape, and the convalescence was uneventful, except he had a small stitch abscess at the upper end of the wound. Before this wound was healed he again left the hospital, against my advice, and rode fifty miles over rough roads in an auto. I had a letter from him a few months ago and he said he thought there was some return of the old trouble in the upper end of the wound.

Case 3. A thin spare-made man, white, aet. 43, farmer, had stomach trouble for ten or twelve years. About one o'clock p. m., on October 10, 1923, he had a severe, agonizing pain in epigastrium. His family physician, who saw him a few hours later, diagnosed a perforation of the duodenum and advised an operation. He lived eighty miles from town and had to be brought to the Fort Sanders Hospital here on the train, part of the way in an auto. It might be said, however, before leaving home and on the train he drank a great deal of water, and after he reached the hospital he drank two glasses of water.

Examination showed a thin, emaciated man who complained of great pain and thirst. He was not nauseated nor had he vomited more than once since the attack. His temperature was normal and his pulse was not very rapid. He had had only one-fourth grain of morphine since the attack.

One thing that puzzled me was that his belly walls were soft and relaxed. There was absolutely no tension anywhere over the belly and he was as tender over the appendix as over the duodenum. This was noticed by other doctors who examined him. Blood count showed 18,200 whites; Polys. 85 per cent.; S. L. 12 per cent.; L. L. 2 per cent.

However, from the history of the case and relying on his physician's opinion and the blood count, it was evident something very serious was needing attention in the man's belly; something very urgent. So, assisted by Dr. Eben Alexander, I operated at eleven p. m.—twelve hours after the attack—through a right lateral incision. On opening the belly a quantity of dirty fluid escaped. In fact, the belly was full of it. I examined, first, the appendix, which was normal; I next examined the stomach, which was normal. Examination of the duodenum showed a small perforation about one-fourth inch in diameter on the anterior surface of the duodenum, one inch from the pylorus, from which fluid escaped in little jets. I closed this opening with two purse string sutures of catgut; over this I plastered a tag of fat from the neighborhood of the stomach with four interrupted catgut sutures. I was tempted to do a gastro-enterostomy, but the patient began showing signs of collapse so I washed out the belly with several gallons of hot saline solution and closed the wound without drainage, leaving some of the fluid in the belly.

Post-operative treatment: I gave one-fourth grain morphine every two hours until his respiration came down to 10 per minute; covered the belly with hot-water bottles and gave six ounces of five per cent. glucose and soda per rectum every four hours, and during the first thirty-six hours he had seven thousand c.c. of normal salt solution by hypodermoclysis. Under this treatment the patient rallied and showed wonderful improvement until the third day. From the third day he had a stormy career for about a month.

Firstly: On the third day I noticed a dark watery discharge from the lower end of the wound; no odor. Taking out a couple of stitches the sheath of the right rectus appeared black, like charcoal. I then removed all the skin stitches. The entire sheath of the right rectus had turned black and looked as though it had been charred in fire. This, of course, was followed by sloughing and suppuration and a terrible stench. Laboratory examination of wound showed colon and streptococcic infection. When sloughing was finished the right rectus and

peritoneum was exposed in a wound as large as a man's hand. Suppuration kept up for nearly a month.

On the fifth post-operative day he developed bilateral parotiditis which subsided under ice bags and guaiacol ointment. On the tenth post-operative day pellagra developed. At the same time large bloody blebs appeared, one under the left nipple and one on either side of the pelvis above the great trochanters. He also had pressure necrosis over the sacrum. In fact he had a most dismal future.

However, under concentrated nutritious diet and hypodermics of cacodylate of soda and arsenate of iron his condition began to improve and he went onwards to a recovery.

After sloughing ceased, in spite of the profuse suppuration I began drawing the edges of the wound together with broad strips of adhesive plaster extending from one flank to a corresponding point on the other side. These strips were changed each day and gradually tightened until the edges of the wound overlapped. Having overlapped the edges of the wound, I kept the edges of the wound overlapped until the patient became accustomed to the shortened waist band and his breathing was natural, by which time the suppuration had stopped. On the fiftieth day from the primary operation, under local anesthesia and loosening up of the right rectus (which had retracted towards right flank) from the skin and peritoneum, I sewed it to its fellow of the opposite side with catgut, closed the skin with silkworm gut, and reapplied the adhesive strips. From that time on the patient improved rapidly, the wound healed kindly and he returned home on December 3rd.

Remarks: 1st. There is an extra hazard in old ventral hernias that are operated. These ventral hernia hazards may be minimized by gradually returning the diaphragm to its normal pre-operative excursions and accustoming the heart and lungs to changed environments before operating.

Finally, it pays in results to have a patient in the best possible shape before operating on him. He can't be gotten in too good shape.

508 W. Clinch Street.

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ARTIFICIAL ARMS*

BY CARL BEARSE, M.D., BOSTON

The problem of substituting an appliance for an amputated upper extremity is far greater than that of a lower extremity. In the case of an amputated leg the problem is simply that of providing a prop with which to aid locomotion, while in the case of an amputated arm it is to substitute for a highly manipulative member. Therefore, in the amputation of a lower limb the same prostheses can be prescribed for people in all stations of life, excepting for such differences as may be due to size and site of amputation, while in the upper extremity there must also be considered the age, occupation, intelligence, and mental attitude of the patient.

Before attempting to describe the various appliances in use, it is appropriate here to mention that there are some who prefer their stumps to any kind of an artificial arm. In an amputated lower extremity it is fair to assume that, aside from begging purposes, everyone desires an artificial limb to help walking, for an artificial leg is almost as good as a natural one. In the upper extremity the problem is different, for the best appliance made does not come anywhere near supplanting a natural arm. Also, artificial legs are fairly well standardized, while there are quite a variety of artificial arms, depending on the use to which they are to be put. It should be remembered that most of us use one hand largely, the other being practically an assistant. Similarly, the artificial hand is prescribed as an assisting hand only, and in some instances the stump itself is preferred to a stump wearing an artificial arm. To illustrate: the writer knows of a newsboy who uses his stump to keep his papers by his side and a pencil in the bend of the elbow, which he could not do so well if an artificial arm were worn.

Dress Arms.—This form of arm appliance is the one most commonly seen. By its use the empty sleeve is filled out, and a gloved hand shows in place of the natural one. It serves no practical purpose aside from ornamentation, the stump itself being more useful. This type of arm should be prescribed for amputations near the shoulder, and for others that will not or cannot use any of the other types of arm appliances.

Mechanical Arms.—These ingenious appliances are made in this country, and are so constructed that by means of pulleys and cords operated from the opposite shoulder, flexion and extension of the elbow and fingers are possible. This enables the wearer to grasp and pick up objects with an appliance resembling a hand. The mastery of this device requires considerable patience and concentration, particularly in amputations above the elbow, but some wearers can feed themselves, manipulate typewriters, etc. While they are fairly sturdy in construction, yet they are not built for use at heavy work, as baggage-handling, for example, so should be prescribed for women, office workers, salesmen and others who do light work. They are more useful in amputations below the elbow, where only the finger mechanism has to be considered, for in amputations above the elbow an additional system of cords is necessary to create motion at the elbow joint, and that increases the difficulty of its use. In amputations near the shoulder it is so difficult to manipulate that for most people it is not practicable. In fact, there are no appliances for short-arm amputations that are really worth while, the dress arm being as useful as any. This emphasizes what the writer[1] has already pointed out,—the importance of saving as much of the arm as possible at the time of the operation.

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*The illustrations in this article were copied from circulars put out by artificial arm manufacturers. They were drawn by S. S. Dushan, M.D., to whom I desire to express my appreciation.

Hook Appliances.—The most commonly used devices, once appliances not resembling hands are considered, are largely, if not altogether, some form of hook appliance. There are various types of hooks, most of them invented by armless men themselves, and some of them are very ingenious. Some are simply hooks attached to a socket, others are made with a spring action, making it possible to pick up and hold objects, while others are constructed to hold tools, like hammer and saw. These appliances are made to withstand hard usage and are very helpful to the workingman. They can be so constructed that an artificial hand can be made to interchange at the wrist, giving a natural appearance when on the street.

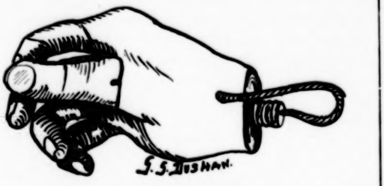

FIG. 1. A dress hand. The only motion possible is a slight spring action at the thumb to facilitate the applying of a glove.

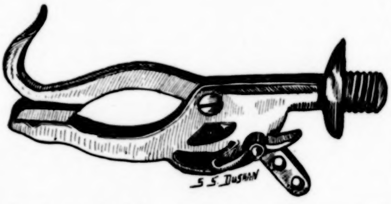

FIG. 2. A sturdy hook appliance. Made so that it can be disarticulated at the wrist for the wearing of a dress hand on the street. The hook itself can carry and move objects, and the jaws and clamp can hold tools.

Cinemetaplastic Prostheses.—This type of appliance is only for the cinemetaplastic amputation, a procedure which utilizes the independent action of some of the muscles to directly activate the artificial hand constructed for this purpose. This technique originated in Italy, being first thought of by Vanghetti,[2] who contented himself with writing about it for about twenty years. Due to his zeal, Pelligrini,[3] Chiasserini,[4] Scalone,[5] and Putti[6] of Italy, Sauerbruch[7] of Germany, and Bosch Arana[8] of Argentine (mentioning those that have become most prominently identified with this work), have performed a number of these operations. To show how recent this operation is, it has been reported that before the late war barely twenty of these amputations had been performed. Since then many more of these operations have been done, but the work is still in the experimental stage, owing largely to the great difficulty encountered in the manufacture of this special kind of prostheses.

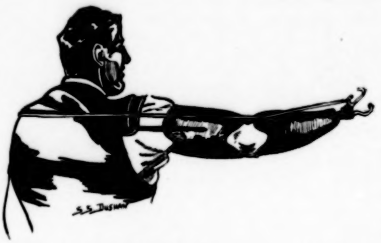

FIG. 3. A hook appliance which can pick up fine objects as coins, hold things steady, and carry objects.

The principle of this arm is so different from other types on the market that relatively few know how to make them. Again, the manufacture of artificial arms has not made the progress in the past as in the case of artificial legs, because it is a more difficult project, and because amputated arms are not so frequent. Recently the writer[9] analyzed 65 amputation cases, and in this series there were but two arm amputations. The largest number of these new arms have been made at the Rizzoli Institute at Bologna; in fact, Bosch Arana at Buenos Aires, who has done a great deal of pioneer work on this subject, has had arms made there. Moreover, a search through the literature disclosed that numerous surgeons have performed this operation and know nothing of their end-results, being unable to furnish their patients with the necessary pros-

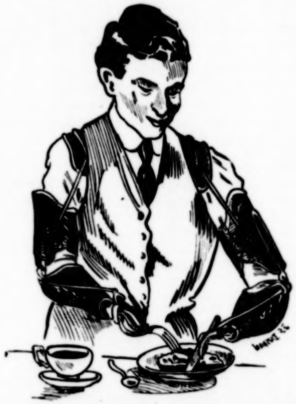

FIG. 4. Showing the possibilities of a hook appliance.

theses. It seems to the writer that this operation is worthy of consideration, but thus far it has not made much headway in this country, so the discussion of this amputation and appliance at this time is largely academic.

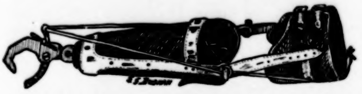

FIG. 5. A hook appliance made to resemble in action that of a thumb and index finger.

ILLUSTRATIVE CASES

The following cases are used to illustrate the different prostheses thought to be most practicable in each instance. These cases were all seen recently, having been referred for an opinion on the condition of the stumps by the Massachusetts Industrial Accident Board.

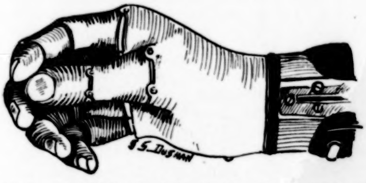

FIG. 6. A mechanical hand showing the joints at the interphalangeal and metacarpal-phalangeal articulations.

CASE 1. N. S. Male. Age 61. Married. Unskilled laborer. Seen September 17, 1923.

History: On August 29, 1922, while cleaning up under a machine that was cutting metal piping, he slipped, and in slipping threw his right arm into the jaws of the machine, sustaining a traumatic amputation at the right elbow.

Examination revealed, in addition to the condition of the stump which was well healed, that he was a healthy-appearing, stolid, ignorant, and discouraged laborer, whose work had always been of an unskilled nature, and who felt that he was of no further use, and seemed too discouraged to try to adapt himself to anything new. His standards of living had never been very high, so he thinks that his compensation will take care of him for a considerable period anyway, and is not interested in what may follow.

Comment: In this instance it seems that a dress arm for street wear is all that he needs. Since it is not likely that he will do any more than care for himself, his stump will serve him as well, if not better, than any appliance. If at some future date he should decide to make himself more useful, he can be furnished with an ordinary hook device, such as a hook attached to a leather socket, which will be all that he will be able to handle. With his mental make-up, lack of initiative, and age, any mechanical device will most likely be more of a hindrance than a help.

CASE 2. M. P. Male. Age 52. Married. Mill hand. Seen September 24, 1923.

History: While cleaning a carding machine on January 18, 1923, the left hand was caught in the machine, crushing and lacerating it to such an extent that amputation was necessary.

Examination showed a well-healed conical stump of the left forearm, just above the styloids, in a middle-aged healthy man, who seemed to be very intelligent, alert, and eager to return to work.

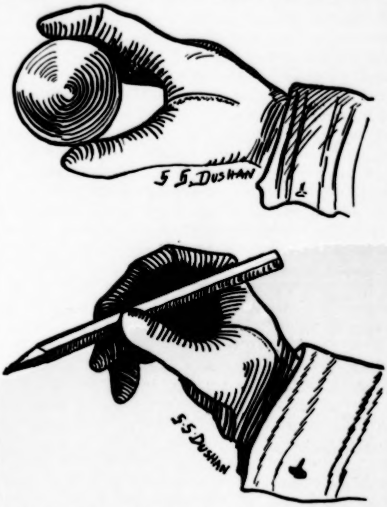

FIG. 7. Showing the possibilities of a mechanical hand, both in range of motion and action.

Comment: While this patient is intelligent, yet he depends on his hands for his livelihood, so the problem is to furnish him with an appliance that will be of assistance in his work. The practicability of the device is the important factor, so a hook device along the lines of those shown in the illustrations should be recommended. With such an appliance he will be able to pick up, hold, move and carry objects of considerable weight, if necessary, thereby increasing his usefulness. If the question of appearance comes up, the apparatus can be so constructed that the hook can be removed at the wrist and interchanged with a dress hand for street wear.

CASE 3. D. B. Female. Age 21. Single. Machine worker. Seen May 2, 1923.

History: On October 3, 1922, while smoothing out some leather in an embossing machine, the current was accidentally turned on, crushing the right hand to such an extent that amputation of the hand was necessary.

Examination disclosed an amputation of the right forearm, just above the wrist joint, in a healthy, intelligent, and optimistic young woman.

In this instance a mechanical hand would be the ideal appliance. Her work will always be of a light nature; she is young, adaptable, and should be able to quickly master the use of such a hand. Since it is possible to flex and extend the fingers of such an appliance, she will be able to pick up and carry light objects, enabling her to carry her pocket-book with it, or keep a book open, and assist her other hand generally.

SUMMARY

When prescribing for an arm amputation, consideration should be given to the age, intelligence, occupation, adaptability, and receptive-

ness of the patient. The dress hand should be advised for short upper-arm stumps, in conjunction with hook appliances, for those that prefer their stumps alone, and for others that cannot or will not use other appliances. The hook devices are, on the whole, the most practicable, for they are constructed to help out at occupations that require some muscular effort. The mechanical arms should be prescribed for those who do light work and who also possess enough intelligence to master their use.

483 Beacon Street.

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THE IMPORTANCE OF DUODENAL FEEDING IN THE TREATMENT OF PEPTIC ULCERS*

BY MAX EINHORN, M.D., NEW YORK CITY

THE principle of rest plays the most important part in the treatment of peptic ulcers. All dietetic regimens, excepting that of Lenhartz, are constructed from this point of view. Barring rectal alimentation, none of the diets in use provides real rest to the affected organ. Even the lightest foods, while in the stomach, induce secretion and peristalsis. Lenhartz's diet supplies ample nutrition in order to invigorate the organ and in this way helps it to combat the disease. Duodenal alimentation has the advantage that with it we can provide ample nutrition and absolute rest to the diseased stomach or to the upper portion of the duodenum.

For the last fourteen years I have practised this method of alimentation quite extensively, and have applied it especially in the treatment of peptic ulcers, with excellent results. Inasmuch as this method of treatment has not yet penetrated the bulk of the profession, I have thought it would be of interest to discuss the subject before you. In order to illustrate the merits of duodenal alimentation, I will show you a number of slides depicting peptic ulcers with deformities of the viscus visible by the x-rays before and after treatment with these feedings. Many of these cases were formerly believed to belong to the surgeon; most clinicians not realizing that such advanced ulcers would still be amenable to medical treatment. However, the good results obtained with this method have demonstrated that a large number of them can be treated with success medically.

Twelve cases of peptic ulcer with deformities (April, 1921, to April, 1922), were described by me in the *New York Medical Journal*, December 6, 1922. Some of them were gastric ulcers with niches of the lesser curvature, one with a niche of the pylorus, and six were duodenal ulcers with constant deformities of the cap. In all of these cases there was a change for the better in the x-ray findings after treatment.

The slides I shall show tonight embrace the cases of peptic ulcer treated from April, 1922, to April, 1923, and illustrate very similar results. In this group there were thirteen cases of peptic ulcer: five ulcers of the lesser curvature with niches, and eight duodenal ulcers with deformities of the pylorus and cap. After the duodenal alimentation period of treatment, the niches have all become considerably smaller or have entirely disappeared, and the deformities have changed for the better.

While these results were obtained by duodenal feeding, there is ample material in the literature of similar cases,—especially of those with niches of the lesser curvature,—which have disappeared under other methods of treatment. The treatment required, however, by the other procedures for the disappearance of the niches, was usually much longer than that required by duodenal alimentation. With regard to the duodenal cap, I am not sure whether there is any mention of material changes in them produced by other methods of treatment.

Post-operative perforating ulcers of the stomach and duodenum have likewise healed perfectly under duodenal alimentation, showing the great potency of this method of treatment. Duodenal alimentation is useful and desirable in a number of instances of peptic ulcer when other medical means are of no avail. Thus, severe and profuse hemorrhages from gastric and duodenal ulcers, pre-pyloric and pyloric ulcers, hemorrhages from the stomach or duodenum not yielding to the usual methods of treatment, are favorably influenced by duodenal alimentation. As an instance of the latter variety, the following case may be briefly outlined.

Synopsis of history of R. V., as given by Dr. F. Butler, to whom I am indebted for it.

June, 1915: Slight epigastric pain, attributed to bad sausages. Gone in a few days.

February, 1916: Fainting; tarry stool; three weeks in bed on Lenhartz diet. After one month of freedom the symptoms returned. X-ray; diagnosis of ulcer.

November, 1916: Exploratory operation by Dr. Finney of Baltimore. Did not find ulcer: appendectomy.

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*Read before the Springfield Academy of Medicine, November 13, 1923.

January, 1917: Recurrence of ulcer symptoms for short period. July, 1917: Hemorrhage which stopped in a few days, but pain continued intermittently. December, 1917: Consulted a number of excellent clinicians. X-rays; diagnosis, "diverticulum of duodenum;" operation advised.

October, 1918: Patient came to me and was given an alkaline powder and abdominal belt.

Free from symptoms until October, 1922, when the patient had a tarry stool on October 20, with continuation of blood in the stools for about a week.

October 22, 1922: Patient vomited a small amount of coffee-ground blood. Modified Sippy treatment for three weeks (under Dr. Butler's care). November 28, 1922: Transfusion of 1000 c.c. of blood, in preparation for tonsillectomy, which was done December 1, 1922. Comparatively free from symptoms until May, 1923.

June, 1923: Symptoms, relieved temporarily by high colon enemas. August, 1923: Recurrence of pain and tenderness. September 5, 1923: Tarry stool. Hemoglobin, 90 per cent. Rest in bed on milk diet for about ten days. September 17, 1923: Came from Glen Cove to New York, followed by tarry stools on September 18, 19, and 20. September 20, 1923: Hemoglobin, 80 per cent.; September 22, 1923: Hemoglobin, 75 per cent.; September 24, 1923: Tarry stool; September 26, 1923: Hemoglobin 70 per cent. Coagulation time, seven and one-half minutes.

September 27, 1923: Bloody stools. The hemorrhage not ceasing, recourse was taken to duodenal alimentation. In a few days the stools became free from blood and the patient picked up very promptly.

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Book Reviews

Local Anaesthesia Methods and Results in Abdominal Surgery. By PROF. DR. HANS FINSTERER, Surgeon-in-chief, Vienna Hospital of The Brothers of Charity. Authorized English Version by JOSEPH P. F. BURKE, M.D., Sc.D., LL.D. of Buffalo, N. Y.; 42 illustrations. Pp. 349. New York: Rebman Company. Price $5.00.

Professor Finsterer's book is not alone an exposition of methods of local anesthesia, but takes up in the greatest detail the technique employed by him in his abdominal operations. During the last decade, the author has employed local anesthesia in between 80 and 90 per cent. of his cases. In some of these, brief anesthetization with ether was given during the part of the operation most difficult for the patient. Finsterer argues that, since chloroform and ether both have a toxic effect upon the liver, and both cause a lowering of blood pressure, it is preferable to operate as far as possible under local novocain anesthesia. By local anesthesia he includes not only the infiltration about the incision in the abdominal wall, but the splanchnic anesthesia of Kappis or of Braun, and also paravertebral anesthesia. He quotes statistics showing that mortality from pulmonary complications is vastly less when the operation is performed under local than when it is done under inhalation anesthesia. He states also that among 2409 laparotomies, including 693 gastric and 163 intestinal resections, he has not had one fatality from surgical shock, although he operated upon the old and cachectic and always as radically as circumstances indicated. He says very little about gas oxygen anesthesia, and evidently has had no experience with this. As he points out, an operation under local anesthesia necessarily takes much longer than one under a general anesthetic; not infrequently his operations consumed from four to five hours.

Finsterer reports his operative cases in considerable detail. The mortality in every group is discussed, the cause of death having usually been determined by autopsy. The report of his experiences in surgery for gastric cancer and ulcer is particularly interesting. While it is unlikely that in this country surgeons will ever adopt the use of local anesthesia to the degree that Finsterer has employed it, there are unquestionably many cases in which operation could be more safely performed under this method of anesthesia. It is enlightening to learn what can be done along this line.

The book is very badly translated, the German constructions being retained in the English translation. This gives a text which is often awkward and frequently ungrammatical. A critical proofreader would have been a great help in the preparation of this book. Taken as a whole, however, we feel that the book is distinctly worth the attention of American surgeons who are seriously interested in the improvement of their technic.

Introduction to Medical Biometry and Statistics. By RAYMOND PEARL, Professor of Biometry and Vital Statistics in the School of Hygiene and Public Health, and of Biology in the Medical School, the Johns Hopkins University. Philadelphia and London: W. B. Saunders Company. 1923.

This book, in the main, treats of the application of certain mathematical principles and theories to the phenomena of life. It is addressed to medical students. In an introductory chapter on definitions and orientation the author refers to biometry as "that branch of science which studies by methods of exact measurement, on the one hand, and precise and refined mathematical analysis, on the other hand, *the quantitative aspects of vital phenomena.*" He suggests that by reason of the tendency of science toward greater precision of results and reasoning the term biology may eventually come to be used to cover only qualitative phases of vital phenomena.

The author prefaces the mathematical treatment of vital statistics with this statement: "The following classes of official vital statistics alone can, in the writer's opinion, be subjected to analysis as scientifically accurate records of natural phenomena.

"1. Deaths from all causes (either for all ages together or for separate age groups, as, for example, 'infant mortality,' deaths under one year of age).

"2. Suicide.
"3. Traumatism.
"4. Homicide.

"This is neither a long nor, except in its first item, a specially important list. But personally I cannot but feel that when we deal with other rubrics we are dealing with mixtures of unknown composition, and with data of a wholly different order of accuracy than those, for example, of the physicist or the chemist. We are forced, of course, in the practical conduct of a statistical business to deal with other rubrics (*i.e.*, of the International Classification), but at any rate, one should when so doing always remember that his material is fundamentally of a dubious character."

The introductory chapters, from which the above are taken, are followed by several chapters in which the presentation of statistical data is discussed in an interesting, instructive, and eminently practical way.

The rest of the book, comprising 162 out of a total of 370 pages, is devoted to the mathematical treatment of observations or statistics, beginning with a chapter on "The probable error concept," and followed by chapters on the theory of probability, special theorems in probability, the measurements of variation and of correlation and curve fitting. An appendix gives various formulae and tables.

One must hesitate to criticize the mathematical part of the book in view of the author's statement that many years of experience have shown that his exposition of the subject actually "works" successfully when applied to biologists and medical students. Were it not for the author's own statement, it would seem that the uninitiated medical student might be handicapped in his effort to grasp the subject by the lack of adequate introductory definition of many of the technical mathematical terms used. For example, most persons reading this book would be inclined to sympathize with a medical student who might complain that such terms as "integral" or "integration" or a phrase like, "the probability integral to replace finite summation of the terms of the point binomial," had been sprung on him without adequate preparation. Even the author's use of non-technical words with a technical significance, while always expressive, may be sometimes puzzling at first to one trained in a different school.

The author's historical references to the mathematical theories or hypotheses considered in the book lends interest to the subject. Without detracting from the credit given and due Karl Pearson for the development of his "skewness" idea it might be mentioned, however, that deviations from the theoretical "normal curve" in recorded observations were recognized and their practical significance considered in work of the U. S. Coast and Geodetic Survey over thirty years ago, and the idea was not then regarded as anything new.

Although this book may present to the average student possible difficulties in the way of its clear comprehension in some of its features, no one interested in the matters of which it treats can lay it aside without being glad that the author has written it. It supplies a distinct need. It offers guidance for those who should be examining more critically the supposed results of public and private expenditures for the promotion of public health. It is valuable even to those who may find difficulty in following out the mathematical theories discussed, for no one should have difficulty in understanding that such mathematical theories, even in their highest development, are nothing more than tools which in competent hands may serve to help to evaluate certain kinds of recorded data, but which can never serve to make any more reliable, material which is "fundamentally of a dubious character."

Industrial Health. Edited by GEORGE M. KOBER, M.D., LL.D., and EMORY R. HAYHURST, A.M., M.D., Ph.D. Octavo, pp. 1184. Philadelphia: P. Blakiston's Son & Co. 1924. Price $15.00.

This is the most recent, the most complete, and, on the whole, the best of the several textbooks in English dealing with industrial hygiene.

It is essentially a revised and enlarged edition of "Diseases of Occupation and Vocational Hygiene," issued by the same publishers in 1910, Dr. Hayhurst replacing Dr. William C. Hanson as junior editor. In addition to the editors, thirty-three authors have contributed one or more sections to the volume. The inclusion of important contributions from such well-informed workers as Dr. Thomas Legge, Sir Thomas Oliver, and Dr. Ludwig Teleky fortunately extends the range of influence of the book and brings to American readers a portion of the abundant experience of these European investigators.

The editors have divided their material, in rather incomprehensible fashion, into five parts and an appendix, but a hundred pages and more of excellent indices greatly facilitate the quest of the seeker after knowledge.

Though a number of chapters and sections have been little changed since their original appearance, much of the book is newly written or revised, and extensive bibliographies abound.

It is almost inevitable that an edited work of this nature should lack uniformity of excellence, and this is true of the work under discussion, but it can unreservedly be commended to the attention of physicians, of public health authorities, and of state labor commissions and to those who have immediate responsibility for safeguarding and advancing the health of industrial workers. It should be accessible to all medical students. Social workers should have it thrust upon them if they do not seek it out, and industrial physicians and nurses cannot afford to work without the aid and stimulation which it must bring.

Dr. Kober and Dr. Hayhurst have at great effort made a splendid contribution to the literature of an increasingly important subject.

Operative Surgery. Covering the Operative Technic Involved in the Operations of General and Special Surgery. By Warren Stone Bickham, M.D., and Phar.M. (Tulane), M.D. (Columbia), F.A.C.S.; Former Surgeon in charge of General Surgery, Manhattan State Hospital, New York; Former Instructor in Operative Surgery, College of Physicians and Surgeons (Columbia University), in the New York Post-graduate Medical School and Hospital, and in the New York Polyclinic Medical School and Hospital; Former Visiting Surgeon to Charity Hospital, New Orleans; Junior Surgeon to Touro Hospital, New Orleans; Former Demonstrator in charge of Operative Surgery, Tulane University, New Orleans; Fellow of the New York Academy of Medicine. Containing 6378 illustrations. Many in colors. Volume I. Philadelphia and London: W. B. Saunders Company.

At the present date, two volumes of Bickham's Surgery have appeared from the press. One is at once impressed in hastily looking over this work by two things; first, the painstaking detail with which everything that the author wishes to speak about is described. There are to be published in all six volumes, and it is evident that in these six volumes operative surgery and its details will be covered in a remarkably thorough and efficient manner. The author's literary style is at once evident, his paragraphs always give adequate description without being too long. Every subject is most thoroughly covered in all of its details and ramifications in a surprisingly concentrated manner.

The other noticeable thing in this work is the large number of extremely good and original drawings, practically all of which have not appeared in medical books before. There is no waste of space through unnecessary illustrations, one illustration often covering three or four points; for instance, the manner of attaching operating towels to the surface of the abdomen is shown in one picture but with four different instruments in four different situations. Other illustrations are of like value. The illustrations of simple technique, such as the withdrawing of blood from the vein, are extremely well depicted and often contain new bits of technique which are of extreme value.

The chapter on local anesthesia is a very adequate example of the excellence of the author's description and the thoroughness with which the subject is covered.

At the ends of some chapters, valuable summaries have been placed for the benefit of the reader. Many new and unusual special instruments are adequately illustrated. The details of applying sutures and fixation of dressings are very well illustrated. This book should be of great value to the student who is learning or who has not already applied many of the simple operations of surgery. We would say that few books on surgery have their texts so adequately illustrated by accompanying drawings as this has. Considerable space is given to operations which are ordinarily considered in the branch of orthopedic surgery, and there is a description of adequate protheses for use after amputations.

The work is divided into three parts:

Part 1. General Procedures Employed in Surgical Operations.

This includes anesthesia, operative technique, and after-care of operative patients.

Part 2. General Operative Surgery.

This includes valuable chapters on skin grafting, plastic surgery, transplantation of tissues, amputations and disarticulations, excisions and osteoplastic resections of bones and joints, comprising thirteen chapters in all.

Volume II starts with Chapter 14 on operations upon the arteries. This also contains eleven chapters devoted to operations upon the veins, lymphatic glands, nerves, bones, joints other than excisions, muscles, tendons and tendon sheaths, ligaments, cartilage, bursae, and fascia, and two chapters upon operations upon the skull and brain and on bone operations on the spine and cord. This volume, like Volume I, is profusely and adequately illustrated with original drawings.

As a reference for the student and also for the busy operating surgeon, this work should compose a valuable addition to one's library.

Rules for Recovery from Tuberculosis. By Lawrason Brown, M.D. Philadelphia and New York: Lea & Febiger. Price $1.50.

This fourth edition of Lawrason Brown's "Rules for Recovery from Tuberculosis" shows without further comment the high esteem in which it is held in the minds of patients suffering from tuberculosis all over this country. This little volume represents probably the best of all the numerous books which have been written intending to give patients some practical ideas on their disease and how to handle it.

As stated in a previous review of the first edition of this book, however, the only criticism which can be made is that it requires a considerable amount of intelligence on the part of the patient to understand and appreciate the immense amount of information which is enclosed between the two covers. Any physician, many of whose patients come from a class who either from inability to speak or read English fluently or from lack of education cannot understand such a book, will realize that this little volume of Dr. Brown's is far beyond the grasp of many such patients. The fact remains, however, that for those patients capable of understanding this book it is, without doubt, the best of its kind.

A Practical Text-Book of Infection, Immunity and Biologic Therapy, with Special Reference to Immunologic Technic. By JOHN A. KOLMER. Philadelphia and London: W. B. Saunders Co. 1923. Cloth, $12.00 net.

Kolmer's book on Infection, Immunity and Serum Therapy has long been considered one of the best works along this line, combining as it does the best of our theoretical knowledge of these problems with their practical application in laboratory and clinical procedure.

Present-day medical practice is making its most scientific progress in this direction, and the development is so rapid that any book a few years old is out of date.

This third edition of over 1200 pages is divided into five sections.

Part 1 devotes four chapters to a thorough discussion of technique, including the methods for obtaining human and animal blood, the technique of animal inoculations, and the methods for preserving serums, and is profusely illustrated with helpful diagrams.

Part 2 deals with the problems of infection and the course of infectious disease.

Part 3 consists of 21 chapters devoted to the principles of immunity and special immunologic technique.

The presentation of these subjects by the author is especially commendable. The theories concerning immunity and the various antibodies, such as agglutinins, precipitins, cytolysins, etc., are clearly stated according to his understanding of them, and he avoids the bewildering maze of speculation and verbosity in which some writers on these subjects lose themselves and their readers.

The practical application follows with clear and definite directions for laboratory workers concerning the preparation of the various vaccines and antitoxins.

The technique of the diagnostic tests, based on the phenomena of specific agglutination and precipitation, is given in detail, and a chapter is included with technique for blood-grouping.

Kolmer's careful research on the Wassermann test is reflected in the chapter dealing with this subject, where his methods are fully described, as are other accepted methods.

A chapter is also devoted to the newer precipitin reactions for the diagnosis of syphilis.

Part 4 consists of 14 chapters dealing with clinical allergy and biologic therapy.

The various diagnostic skin reactions, such as the tuberculin test, protein tests in hay fever, asthma, etc., are described in detail with many colored illustrations, and the specific treatment outlined. Directions are also given for the Schick test and for the preparation and use of toxin-antitoxin. Then follow about 300 pages given over to the prophylaxis and treatment of human and animal infection with vaccines and serums, each disease being separately dealt with and much information incorporated which up to this time has been found only in journals devoted to experimental and research work.

Part 5 outlines a complete course of 142 experiments for students in experimental infection and immunity.

Kolmer's "Infection, Immunity and Biologic Therapy" is not only a comprehensive text-book, but a valuable reference book and guide for technicians in biologic and serologic laboratories, for clinical diagnosticians and for those public health workers who are applying the latest methods in the prevention of disease.

The print is large and clear, the illustrations many and appropriate, and the book is carefully indexed.

Circulation in Health and Disease. By CARL J. WIGGERS, M.D., Professor of Physiology in the School of Medicine, Western Reserve University, Cleveland. Second edition. Lea & Febiger. 1923.

The second edition of Dr. Wiggers' book on the Circulation in Health and Disease is essentially a new book. It is much more comprehensive and a great deal of new material has been accumulated since the issue of his first edition that appeared eight years ago. One welcomes the appearance of this work because we now have in one volume a fairly complete review of the mechanics of the circulation in normal and abnormal states. It is of great help to the student and teacher, for in it one can readily find abundant discussion of the important factors that underly the regulation of both the central and peripheral portions of the circulation.

The reader will find a thorough analysis of the electrical, mechanical and optical methods that have been devised for the study of the circulation. These methods and their application to disease are gone into and most critically appraised. There are sufficient references to clinical conditions to make it of interest to the practitioner who wants more thorough information concerning the circulation. It is gratifying to see controversial points like the mechanism of heart murmurs taken up most scientifically and reviewed, differentiating those ideas that are based on opinion from those based on proof and knowledge. The writing of this volume is a great tribute to the investigator who works in the laboratory, for it illustrates what growth of valuable knowledge that has a direct application in the clinic has resulted from experimentation. This book is a great American contribution to knowledge of the circulation.

Case Records of the Massachusetts General Hospital

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN WEEKLY CLINICO-PATHOLOGICAL EXERCISES

EDITED BY
RICHARD C. CABOT, M.D., AND HUGH CABOT, M.D.
F. M. PAINTER, ASSISTANT EDITOR

CASE 10111

An American automobile mechanic of thirty-seven entered December 9 for study.

F. H. Good so far as known.

Habits. Good.

P. H. He did not remember the diseases of childhood. He broke his leg when a boy. Seven years ago he had pleurisy. Since that time he had been subject to frequent "colds." A year and a half ago sugar was found in his urine and he was placed on a diet upon which he had lost weight. Subsequent examinations proved that he had a physiological glycosuria; on leaving out excessive sweets he was sugar free. On returning to ordinary diet he gained ten pounds, but never regained his normal weight. His best weight, eight years ago, was 200 pounds; his present weight 162.

P. I. For the past year and a half he had had stiffness of the neck and pain in the back of his head which had prevented him from turning his head in any direction and made him change the character of his work. At times he was obliged to go to bed because of this pain and stiffness. Eight months ago he came to the Out-Patient Orthopedic Department. He was told no diagnosis, but was given a collar. Very little improvement followed. Six months ago he had a dry hacking cough. Six weeks before admission he began to have severe frontal headache, worse toward evening. A week ago he began to have severe muscle pains in the legs and back, as though he were coming down with grippe. He also had slight chills, and his wife thought he probably had had some fever since that time. During the week he had had unproductive cough. He had had to give up his work, and for the first day stayed in bed, though he sat up for two or three days later. For the past three days he had grown increasingly drowsy. The day of admission he became irrational. He seemed to forget words and to use incorrect words. His wife thought his speech was thick and his articulation poor.

Records of the Orthopedic Out-Patient Department, September 26, fifteen months before admission. Stiffness and swelling of the neck of six months' duration. Provisional diagnosis of tuberculous abscess of glands of neck and tuberculosis of spine involving axis. *April 28,* seven months later. X-ray showed the lower cervical and upper dorsal spine normal. Appearance of first cervical vertebra abnormal, perhaps due to position. Two later plates gave no additional information. *May 9. Tuberculosis Clinic.* Abscess tapped. 5 c.c. of thick yellow pus. Smear, broken down pus cells. No tb. or other bacteria. Culture negative.

P. E. A stalwart man, drowsy and mentally clouded, confusing his mouth with his eyes, and confused when asked to move his extremities. He complained of headache. Sensation could not be determined because of his lack of response. Mouth held rather tight. Neck stiff and painful on motion. He moved the right knee when the head was flexed. *Lungs.* Dullness, bronchial breathing and coarse râles at the left apex in front. Slight dullness, bronchial breathing and increased tactile fremitus at the left apex posteriorly. *Heart, abdomen, genitals, extremities* and *pupils* normal. *Knee-jerks* slightly increased. Kernig present. *Fundi* slightly blurred on the nasal margin, both sides. Not choked.

T. 101°-104.1°. *P.* 65-132. *R.* 20-33. *Urine.* Normal amount when recorded. Sp. gr. 1.018, 30-40 leucocytes per high power field. *Blood* normal. *Wassermann* negative. *Non-protein nitrogen* 38.1 mgm. *Sputum* very stringy. No blood or tb. *Stools* negative. *Lumbar punctures. December 9.* 10 c.c. clear colorless fluid. Initial pressure 300 mm.; after withdrawal of 5 c.c. 190 mm.; after 5 c.c. more, 130 mm. Pulse and respiration oscillations present. Jugular compression 100 mm. No block. 280 cells, 3% polynuclears, 77% lymphocytes, 20% mononuclears. Albumin +++. Globulin ++. Wassermann and gold solution negative. Total protein 200. Sugar 0.031. Pedicle found; no tb. seen in it. *December 14.* 14 c.c. very slightly turbid fluid. Hydrodynamics normal. Initial pressure 290; after withdrawal of 5 c.c. 140; after 5 c.c. more 120, after 4 c.c. more 100. 255 cells, 90% lymphocytes, 9% polynuclears, 1 large mononuclear. Scheer method, centrifuged with alcohol, no tb. bacilli found. Numerous paired cocci (contamination?). Pedicle, no tb. or other organisms. *X-ray.* Plates of the upper dorsal and lower cervical spine showed no positive evidence of disease in the vertebrae. There was, however, some slight abnormality in the relation of the sixth and seventh dorsal. Request more plates. . . . Left lung field distinctly less radiant than right. Dullness most marked at the apex, where there was complete obliteration of the lung markings. Heart and mediastinal contents displaced to the left. Diaphragm high on the left and respiratory movements limited.

Orders. December 9. Soft solid diet. Ice bag to head. Individual precautions. $MgSO_4$ ℥ iss in the morning. December 12. Morphia gr. 1/6 s.c. twice each night p.r.n. December 13. Pyramidon gr. v. December 14, 15 and 16. Morphia gr. 1/6 to 1/4 once to every two hours p.r.n. December 16. Chloral hydrate gr. xxx with sodium bromide gr. 50 by rectum at 3 a.m. and 9 p.m.

The day of admission Dr. Lord found dullness and medium consonating and sonorous râles at the left apex.

The patient was much more comfortable after the first lumbar puncture. He had marked delirium at night, somewhat controlled by morphia, but gradually increasing after the second lumbar puncture. The headache grew rapidly worse. December 17 he died.

DISCUSSION

BY DR. RICHARD C. CABOT

NOTES ON THE HISTORY

We have in addition to the history obtained here this additional information from the Out-Patient Department that he had in his neck an abscess believed to be tuberculous, and that on some not very clear data he was believed to have tuberculosis of the axis. The rest of the history sums up in a long stiffness of the neck, evidences of infection which later seem to involve the nervous system, making us think of meningitis, and a dry hacking cough which was mentioned six months ago, but which we did not hear much of lately.

NOTES ON THE PHYSICAL EXAMINATION

Apparently there is nothing in the lungs on the right. In the left there is pretty good evidence of pulmonary tuberculosis.

There is nothing in particular in the blood or urine.

The spinal fluid gives evidence of a chronic meningitis.

The heart and mediastinal contents were seen to be displaced to the left, as if by contraction of a phthisical lung.

The orders are not especially significant.

DIFFERENTIAL DIAGNOSIS

This reads like a perfectly straight case of pulmonary tuberculosis with tuberculous meningitis. Whether there is anything in the spine or not I do not feel clear. He had a stiff neck, but he had abscess in the neck, and it is perfectly possible so far as I know that there are glandular or other masses there enough to give him stiff neck. The x-rays are negative except as far as the axis is concerned, and I do not think that anything in the axis could give him as much stiff neck as he has been having. So I do not see that we have any reason to say tuberculosis of the spine. We have I think tuberculosis in the meninges. There are no bacilli found in sputa or spinal fluid. But it is not at all unusual to find tuberculosis post mortem without any proof of it in that way. I do not see what else it can be. I do not know any disease that involves those two organs with such signs except rare diseases which we do not get here, blastomycosis and some of the other fungi that I do not know much about.

I think he died of phthisis with tuberculosis of the meninges, and of what else I do not know.

A PHYSICIAN: Do you believe he had meningitis all the time he had stiff neck?

DR. CABOT: No. I think that was due to his abscess.

A PHYSICIAN: And in that abscess no tuberculosis was found?

DR. CABOT: We should expect that.

DR. YOUNG: It was a sterile abscess, which usually means tuberculosis.

DR. CABOT: It was opened in the Out-Patient Department, and I never knew them to find tuberculosis in the pus so obtained.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Tuberculous meningitis.
Chief cause of death, disseminated tuberculosis (spine and lungs).

DR. RICHARD C. CABOT'S DIAGNOSIS

Tuberculous meningitis.
Pulmonary tuberculosis.

ANATOMICAL DIAGNOSIS

1. *Primary fatal lesions*

Chronic tuberculosis of bronchial glands and apices of lungs.
Tuberculosis of lungs with cavity formation.
Tuberculous meningitis.

2. *Secondary or terminal lesions*

Slight hypertrophy and dilatation of the heart.

3. *Historical landmarks*

Chronic pleuritis, left.

Dr. Richardson: The pia showed a thin slightly granular exudate along the upper part of the medulla and extending up along the pons, out the fissures of Sylvius and between the frontal lobes. The vessels of Willis, sinuses, middle ears, pineal and pituitary glands were negative. The choroid plexus was thickened and reddened. Macroscopically it was suggestive of tuberculosis of the meninges, but not very well marked. Microscopical examination showed that it was tuberculous meningitis. Not infrequently in tuberculous meningitis the evidence of exudate along the meninges is very slight. Cases are reported where it was not definite macroscopically, but microscopically it was tuberculous meningitis. That is the interesting thing here, that the lesion is so slight, yet it is tuberculous meningitis. The brain tissue was a little wet, otherwise negative.

There was nothing in the pleural cavities. The right lung showed no adhesions. The left lung was bound down by old adhesions. There was a moderate amount of dirty reddish mucus in the trachea and bronchi. Some of the bronchial glands showed obsolete tuberculosis. In the apex of the right lung was a small fibrocaseous pigmented mass thirteen mm. across. The tissue elsewhere was spongy and pale red, with no definite tubercles. The pleura over the upper third of the left lung was thickened and in the apical region there was a cavity 5½ by 4 cm. containing much purulent material. The cover glass from this material showed innumerable typical tubercle bacilli. A dilated bronchus led into the cavity. In the tissue about the cavity tubercles were scattered, and a short distance below there was a mass of fibrocaseous material, a little below that a few smaller masses, and scattered about these were smaller and larger tubercles. In the lower lobe only one small fibrocaseous nodule was found.

The heart weighed 400 grams,—slightly enlarged. The valves were negative. There was a little dilatation on the right. The coronaries and the vascular apparatus generally were negative.

The spleen weighed 125 grams, was soft, but no definite tubercles were made out.

Dr. Cabot: You have no evidence on the question whether he may have had tuberculosis of the axis or any of the upper cervical vertebrae?

Dr. Richardson: There was nothing that we could make out.

Dr. Cabot: The only other point that seems to me rather interesting is how little he coughed, according to this account, yet how much disease there was in that left lung.

CASE 10112

An American housewife of forty-three entered October 18.

F. H. Her father died of tuberculosis of the bowels, her mother of pulmonary hemorrhage.

P. H. Her cta. was painful until after the birth of her two children, aged eight and six. Her last two menstrual periods had lasted only two days. She had had occasional clear leucorrhea. At twenty-three she had grippe in the autumn. She worked hard during the winter and began to be troubled with right lower quadrant pain which lasted for seven years until her right ovary was removed and the uterus suspended twelve years before admission. Five years later her appendix was removed.

P. I. In February, a year and nine months before admission, she began to have right epigastric pain with vomiting, the attacks coming on once or twice a week and lasting one or two days, apparently without relation to food. She was told that she was a trifle yellow. In July, a year and five months later, she had an attack which lasted three weeks, requiring morphia and culminating with a "gurgling, trickling, bursting sensation in the region of the gall-bladder, as though it had got too full and broken." The pain subsided, then commenced again. From September until May she was laid up with another severe attack of pain and vomiting of light colored and very sour vomitus. Since then she had been better and had constant right epigastric pain radiating upward and around into the back. She had had short hacking cough all summer. At intervals she was somewhat dyspneic and very nervous. When in bed she could not turn on her right side on account of dragging pain.

P. E. A fairly developed, gray haired, thin, tired looking woman, decidedly nervous. *Lungs* and *heart* normal. *Abdomen* tympanitic. Two old scars of an appendix and a right rectus incision. Some tenderness low on the right. Considerable tenderness over the gall-bladder region. Moderate rigidity of the right rectus, partly voluntary. *Pelvic examination.* Perineum torn. Uterus high. Cervix torn, more on the left. Considerable tenderness and some fullness in the right upper side. *Pupils* normal. *Knee-jerks* present. *Extremities* negative.

Before operation *T.* and *R.* normal, *P.* 91-72, *urine* and *blood* not recorded.

October 23 operation was done. Next day the patient was very querulous. The temperature was only slightly elevated. October 26 she complained loudly of pain in the chest. Next day the temperature rose to 103°, the pulse to 120, the respirations to 35. Examination showed consolidation of the lower lobe of the right lung. There was slight cough and some pain in the right chest. October 29 she had some difficulty in breathing. Next day the signs included the middle lobe and October 31 the left lower lobe also. She was very cyanotic. She was given oxygen and stimulants. November 1 there was extreme distention. There were signs of consolidation over the entire left back. The dullness was now slightly increased, but the breathing was broncho-vesicular. November 3 the white count was 48,700. November 4 she seemed considerably better. Most of the time her color was good, though she had occasional attacks of cyanosis. November 5 bedsores were appearing over the sacrum. The temperature continued at 102°. The signs in the right lung cleared, but the left lung was full of râles with patches of bronchial breathing. The pulse was a little weaker. She had a glossitis. About midnight she began to fail very fast. The morning of November 7 she died.

DISCUSSION

BY DR. EDWARD L. YOUNG, JR.

This sounds as though autumn was a part of her anatomy, but I suppose there may have been some connection between that illness, her work during the winter, and pain beginning in the spring.

This sounds to me like a very definite story of cholecystitis which has gone on for a year and nine months and presumably longer. I do not see how we can assume that the right lower quadrant pain was due to the gall-bladder, because a retroverted uterus with congestion can cause it and the symptoms were relieved by operation. But the pain which she describes is very suggestive of inflammation of the gall-bladder,—putting it in a little broader terms, trouble with the biliary tract. The lack of its being constant in relation to food, the definiteness of the attacks, and the jaundice, which seems to be fairly definite, all point toward trouble in this region. The mere fact that she is yellow does not necessarily mean that she has stones in the common duct, because adhesions can cause enough obstruction or even the edema or congestion of an inflammatory process can cause enough obstruction to cause jaundice.

Practically always descriptions such as this given by a patient do not mean what the patient thinks they do, but it is not safe to say they never do because every now and then what a patient describes does happen, and of course we do see gall-bladders which have perforated into an omental mass around them. As the story goes I do not think it is fair to put any other diagnosis first.

On this story and examination I should make a diagnosis of trouble with the gall-bladder. If the patient asked I should tell her I did not care whether there were stones or not, that the inflammation was the main thing. The operation would consist in doing the thing best calculated to remove the trouble and leave the patient behind. Of course looking backward is always clearer sight than looking forward, and we wonder whether this story of a "short hacking cough all summer," and "a thin, tired-looking woman" would make one hesitate to do a removal of the gall-bladder, which certainly does carry a higher mortality than simple drainage. I should say gall-bladder disease first, and no real second to be considered.

DR. YOUNG'S PRE-OPERATIVE DIAGNOSIS

Cholecystitis.

OPERATION

Pre-operative diagnosis not recorded. Ether. Three-inch upper right rectus muscle splitting incision. The gall-bladder was found slightly thickened and bound by several adhesions to the stomach. No stones felt. Stomach and duodenum normal. Kidney palpated and found normal. Pancreas slightly thickened. Gall-bladder opened and viscid bile obtained. Tube with flange sewed in with purse string suture and gall-bladder dropped back. Cigarette wick to base of gall-bladder.

FURTHER DISCUSSION

In other words they did the least possible operating, gave her the drainage which would tend to restore as far as possible normal conditions.

The report says "pancreas slightly thickened." It is very easy to assume, in feeling a pancreas, that it is slightly thickened, and I do not think it means a great deal.

DR. MEANS: What do you think were their reasons for doing drainage instead of cholecystectomy?

DR. YOUNG: Because it was a great many years ago and cholecystectomy was not being done. To-day I think on that basis, with a thickened gall-bladder, with so little evidence of trouble in the liver itself, the gall-bladder would have been taken out.

DR. CABOT: This was Dr. Maurice Richardson.

DR. YOUNG: There is very little that I want to say about that. Operations on the upper abdomen are more apt to be followed by pneumonia, perhaps because of the splinting of the diaphragm in an attempt to lessen the damage that respiration causes, perhaps because of the spreading of sepsis through the lymphatics. This coming on as it did within three days I think can be said to be caused by the operation. Of course she died of the infection in the chest.

I shall be interested to see what Dr. Richardson tells us about the pancreas. I think it very often is true that with a cholecystitis there is also a certain amount of pancreatitis, so that the head of the pancreas is hard. But it is very difficult to tell in feeling of it how far that is pathology and how far it is something that is desired to be felt.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Cholecystitis.
Pneumonia.

DR. EDWARD L. YOUNG'S DIAGNOSIS

Cholecystitis.
Pneumonia.

ANATOMICAL DIAGNOSIS

1. ***Primary fatal lesion***

(Cholecystitis.)

2. ***Secondary or terminal lesions***

Septicemia, streptococcus.
Lobar pneumonia, both superior lobes.
Septic spleen.

3. ***Historical landmarks***

Operation wound, cholecystotomy.
Obsolete tuberculosis of a bronchial lymphatic gland.
Scars of old operation wounds, appendectomy, salpingectomy, ovariectomy.

Dr. Richardson: There was an old linear scar in the anterior abdominal wall on one side and on the other a recent wound. The fundus of the gall-bladder was adherent to the tissues at the base of the wound. The gall-bladder presented the surgical opening mentioned. It was empty. The mucosa was not remarkable. The cystic, hepatic and common bile ducts were negative. The pancreas was negative except that it had two good ducts, both patent.

Dr. Young: As you felt of it it would not be considered hard?

Dr. Richardson: It was about the usual consistency.

The lungs showed a frank lobar pneumonia of the upper lobes. The heart valves and cavities and the aorta and great branches were negative. The spleen was mushy, the kidneys negative. The bladder, vagina, uterus negative, the left Fallopian tube and ovary present and negative, the right absent. The gastrointestinal tract was negative.

Culture from the heart blood showed a growth of the streptococcus.

Dr. Means: Was there enough in the gall-bladder as you read it to give her all this pain and difficulty of a year and nine months?

Dr. Young: Yes, I think there was without any question.

CASE 10113

First entry. An Irish-American farmer of fifty-nine entered fourteen years before his final admission. He gave a negative past history except for gonorrhea in his youth. His complaint was "indigestion" of long standing and recent pain in the right lower quadrant.

Examination showed a mass, spasm and tenderness in the right lower quadrant, a left inguinal hernia, and a depression the size of a palm on the left anterior chest wall.

At operation a gangrenous appendix with perforation and abscess was removed. He made a good convalescence and was discharged in excellent condition two weeks later. A year afterwards he reported that the operation was entirely successful.

Second entry, October 25, fourteen years later.

Additional P. H. He had possible typhoid fever in boyhood, scarlet fever and perhaps a fracture of the skull in youth, and numerous other broken bones—both lower legs, the left arm, a few ribs, a clavicle. Two years ago he had pneumonia.

P. I. Two years ago he had his first urinary symptoms—frequency, scalding micturition, and dribbling at the end of urination. After a month of this he had acute retention lasting two days. Catheterization by a physician was followed by some bleeding. After this he was free from symptoms except for a little falling off in the force of the urinary stream until five months ago, when the same sequence of symptoms accompanying the first attack of retention recurred. He catheterized himself, with bleeding. Again he was free from symptoms until his third attack of acute retention, two weeks before admission. He catheterized himself only once. There was no bleeding.

Records of the Out-Patient Department. June 26, four months before admission, he reported dysuria for a week, three weeks ago. Examination showed ℥ ii pussy residual tinged with blood; the prostate enlarged, nodular on the left, elastic. The urinary sediment showed a great amount of pus. Cystoscopy: a number 26 French sound passed easily, but was followed by bleeding. The cystoscope could not be passed. Prostate nodular; was reduced in size by massage. *July 9.* Urine clear. Nycturia 2-3. Cystoscopy not done—bled too easily. *August 21.* Pain in the right side. Cystoscopy:

urine clear; no bleeding; bladder clear, trabeculated. Prostate markedly enlarged. Lobes smooth and round. On the anterior commissure was a small slightly ulcerated smooth nodule.

P. E. Well nourished. Sclerae slightly cloudy. Barrel chest. Slight excursion. *Lungs.* Breath sounds came through poorly anteriorly. Lower left thorax in front presented a depression suggesting a massive collapse. *Heart* somewhat enlarged; no measurements recorded except left border of dullness 12.5 cm. from midsternum. Action slow. Radials palpable, also femorals to an unusual degree. *B.P.* 190/110-95/70. *Abdomen* protuberant. Some tenderness and spasm over scar in right lower rectus. Higher up in the right flank was another point tender to deep palpation. Some right costovertebral tenderness. Left inguinal hernia. Right ring relaxed. *Genitals, pupils* and *reflexes* normal. *Extremities.* On the left ring finger was a tumor the size of a large bean, movable, not tender, which had grown gradually for many years. *Rectal examination.* Prostate symmetrically enlarged, smooth, elastic, nontender.

Before operation *T.* 97.1°-103°, *P.* 62-105, *R.* normal; *urine,* ℥ 42-152, sp. gr. 1.014-1.020, cloudy at all of three examinations, reddish at two, a very slight trace to a slight trace of albumin at all three, red blood cells at two, leucocytes at two. *Renal function.* November 7 appearance time 30 minutes, function 60 per cent., November 8 appearance time 3 minutes, function 85 per cent. *Blood* not recorded.

October 27 after the patient had not voided for several hours and was unable to do so he was catheterized and nineteen ounces of urine withdrawn. He complained for some hours afterwards of frequency and dribbling and was again catheterized, ℥ 22. Before this his residual had been from ℥ 1½ to ℥ 5. Afterwards the residual was low, about ℥ 3, and there was no further retention. He had, however, great frequency. November 28 his temperature began to rise, reaching 103° the next morning. During the next three days it twice rose to about 101°. He complained of nausea after taking mineral oil. His appetite was poor. The catheter had been working well.

November 3 cystoscopy showed the capacity of the bladder good; some trabeculation of the bladder wall; intravesical enlargement of both lateral lobes and the anterior lobe of the prostate. The anterior lobe appeared to be about the size of a small grape. After this the temperature hovered about 99°. The fluid intake was fair. November 5 the catheter was readjusted. The renal function and the non-protein nitrogen were satisfactory and the patient was comfortable. November 9 the temperature was down and the blood chemistry normal.

November 10 operation was done. There was more bleeding than was expected after it. That night the air was released from the Hagner bag and the suprapubic drain was removed entirely, allowing the bloody urine to soak the dressing. Next day the bag was removed and a urethral catheter introduced and anchored. The patient was unable to keep anything on his stomach, and subpectorals were resorted to. The catheter worked fairly well. Vomiting continued. November 12 the stomach was washed out and about two quarts of dark fluid drawn off. The relief was almost immediate. Since the operation the temperature had gradually risen to 101.5°. Next morning he looked fairly well, but in the afternoon began to appear uremic, and in the evening in spite of three subpectorals of about 1500 c.c. each he was distinctly worse. The non-protein nitrogen was 126 mgm., the temperature 102°, the blood pressure 94/65. His color was bad. Although his mind was clear he was drowsy all the time, but easily roused.

November 14 a stomach wash resulted in a pint of dark brown material without much relief. Distention was marked in spite of several doses of pituitrin, enemata and rectal tubes, all of which resulted in only a little gas. The breathing became more labored and there was some cyanosis. The pulse stayed at about 120 and was of poor quality.

November 15 another stomach wash resulted in a large amount of fluid, stercoraceous in odor and appearance. There was some relief. The distention was reduced. In a few hours the distention was again marked and unrelieved by poultices, pituitrin, etc. The heart action improved a little on digifolin therapy. The respirations were more labored, but the cyanosis seemed less marked. 500 c.c. of 5 per cent. glucose was given subpectorally.

Late in the evening the patient was clear mentally, denied pain and seemed only a little lower than earlier in the day. The abdomen was not extremely distended. The respirations were 44, the pulse 132. Half an hour later he died.

DISCUSSION

BY DR. HUGH CABOT

I think there is no reason to regard his first entry, at which time he was suffering from acute appendicitis, as having any bearing upon his present difficulty. The history with which we are now concerned is alleged in one place to have begun with urinary symptoms two years ago and later it is stated that it began eight months ago. I think we are safe in assuming that the earlier date is more likely to be correct. At that time he had acute retention, relieved by catheterization, and the bladder apparently took up its work again without great difficulty. It is interesting to note that on this occasion and subsequently catheterization was followed by bleeding, which suggests pretty acute congestion, commonly seen in benign types of enlargement of the prostate. At the time of his examination in the Out-Patient Department in June before his admission he showed a very moderate amount of residual, but evidently considerable infection. The cystoscopy finally successfully carried out in August shows the typical bladder of prostatic obstruction, though apparently well compensated and with small residual.

The indications for operation were clear, and I assume it was advised at this time.

His examination shows him to be no more unsound than the average man of seventy-three. We are left in ignorance as to the cause of the deformity of the left chest, and apparently no x-ray was taken. His blood pressure varies from a considerable elevation to a level distinctly below normal, and there is, I think, satisfactory evidence of a pretty high grade of arteriosclerosis.

The circumstances related on October 27 suggest that his ability to empty his bladder is pretty narrowly balanced and that he rather easily gets acute retention. It is not clear to me why they did not think it wise to put him on some form of constant drainage at the time of his admission, but perhaps his small residual influenced them to continue observation without drainage. On the other hand it is perfectly certain that operation for any type of obstructing prostate must be preceded by drainage over a period sufficient to stabilize kidney function, and unless they were in doubt as to the indications for operation it would have seemed wise to institute drainage at once. Just when he was put on drainage is not clear, but we may assume that this was instituted and kept up for a reasonable period before operation.

All the tests of kidney function are reasonably satisfactory, and as far as they go suggest that his kidneys are likely to stand the strain.

It is not easy to be sure as to the cause of his fever before operation. In patients on catheter drainage fever is occasionally caused by infection of the prostate incident to the catheterization. On the other hand the commonest cause of fever in patients with prostatic obstruction is kidney infection, and in the absence of evidence to the contrary it is wiser to assume that this is the case.

Boiled down, this case appears to show a considerable degree of prostatic enlargement, apparently of the adenomatous type. There is no evidence here submitted suggesting that it is malignant. He has a good deal of arteriosclerosis, a somewhat doubtful pair of lungs, and possibly an intercurrent pyelonephritis consequent upon drainage.

All things considered I should not regard him as a particularly good risk and should be inclined to prefer the two stage suprapubic operation.

The indication for operation is clear and my personal preference is for the suprapubic route in these relatively large prostates.

DR. CABOT'S PRE-OPERATIVE DIAGNOSIS

Adenomatous enlargement of the prostate.

PRE-OPERATIVE DIAGNOSIS

Obstructing prostate.

OPERATION

Spinal procain. The bladder was opened suprapubically. Exploration showed no stones or diverticula. The prostate itself was markedly enlarged and felt edematous. It was enucleated without difficulty. A Hagner bag was inserted for control of hemorrhage. Bladder and wound were closed around a suprapubic drainage tube.

PATHOLOGICAL REPORT

Two lobes of prostate joined together by a broad band. The larger lobe is the size of a plum. On section they show moist white lobulated surfaces.

Microscopic examination shows hyperplasia and dilatation of the gland tubules with papillary ingrowths of their lining epithelium. The stroma is infiltrated with small round cells.

Adenomatous hypertrophy.

H. F. Hartwell.

FURTHER DISCUSSION

The operation seems to have developed nothing in addition to the previous evidence, and the pathological report shows that the enlargement was of the benign type.

I note that the bleeding was more than was expected, an observation relatively common in my experience with one stage operation. However, it seems to have been satisfactorily controlled with a Hagner bag.

His difficulty after operation seems to have been largely with his digestive tract, the persistent distention and continual vomiting being probably due to the paralytic type of distention rather commonly seen in patients with prostatic obstruction and apparently related to toxemia of renal origin.

It soon became clear that his kidneys were not doing their work, as the high non-protein nitrogen of 126 milligrams together with a temperature of 102° and a low blood pressure would suggest.

From this time on until the end it was a constant struggle with his distention. It was never satisfactorily eliminated.

I think his death was primarily due to renal insufficiency, though in the back of one's mind is the question whether his old appendix operation could have resulted in adhesions cramping the intestine so that it was unable to do its work under unfavorable conditions. I think, however, that a diagnosis of intestinal obstruction of the mechanical type would under these circumstances be a little far-fetched.

Necropsy should show arteriosclerosis, hypertrophy and dilatation of the heart, marked distention of the intestine, acute renal infection of the pyelonephritic type, probably considerable sloughing about the wound in the bladder, and possibly a diphtheritic cystitis.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Adenoma of the prostate.
Operation, suprapubic prostatectomy.

DR. HUGH CABOT'S DIAGNOSIS

Arteriosclerosis.
Hypertrophy and dilatation of the heart.
Paralytic ileus.
Acute pyelonephritis.
Infection of prostatic cavity?
Diphtheritic cystitis??

ANATOMICAL DIAGNOSIS

1. *Primary fatal lesion*

(Adenomatous hypertrophy of the prostate.)

2. *Secondary or terminal lesions*

Suppurative nephritis.
Arteriosclerosis.
Ulcer of the duodenum.
Slight peritonitis.

3. *Historical landmarks*

Suprapubic prostatectomy.
Scar of old operation wound for appendectomy.

Dr. Richardson: The incision for the examination of the trunk was restricted to the abdominal wall. The head was not examined.

The peritoneal cavity contained a small amount of pale cloudy fluid material. The serosa of the intestines was slightly reddened and roughened in places. The duodenum just below the pylorus, postero-laterally to the right, presented a small loss of substance 5 mm. across with rounded margins descending to a smooth grayish intact base. The ulcer was shallow and rested over the upper part of the head of the pancreas. The small intestine elsewhere was somewhat distended and contained much thin pale cloudy fluid material. The mucosa was negative. The large intestine was slightly distended, the mucosa negative. There were a few small shallow smooth walled diverticula in the sigmoid.

The abdominal aorta and its great branches showed marked arteriosclerosis.

The spleen was small and the tissue pale brown-red with rather prominent trabeculae and cut ends of vessels.

The kidneys combined weighed 333 grams. The tissue showed scattered through it miliary abscesses and areas and streaks of purulent infiltration. In the wall of the bladder there was an operation wound. The trabeculae were prominent, and here and there between them were smooth walled shallow diverticula. In the situation of the prostate there was a thick fibrous shell the inner surface of which was blackish-red, irregular, and slightly shaggy.

Further dissection was restricted.

FURTHER DISCUSSION BY DR. CABOT

I do not think that the ulcer of the duodenum played any part in the fatal termination. In fact it is likely that it produced no symptoms. His death was clearly due to suppurative nephritis, one of the common types of infection consequent upon urinary obstruction. His arteriosclerosis was as expected.

It is possible that more prolonged drainage might have enabled them to avoid the fatal kidney infection. In looking back over the case it seems probable that the more conservative plan of treating this patient to a two stage operation might have yielded a better result.

◆

DIPHTHERIA MORTALITY

Although only about fifteen out of every hundred thousand of the people in this country now die of diphtheria each year, the total is about fifteen thousand. This large number of deaths is unnecessary. Tell the people about the advantages of the Schick test and toxin-antitoxin treatment. Practically all physicians use antitoxin in the treatment of diphtheria today. It is a wonderful curative measure, if applied early, but prevention is better than cure. Combat the false advice of the antis. The mild, unrecognized cases may infect more susceptible persons and incurable toxemia result. A school board should be applying the test to the children under its care. If it is not being done the physicians should ask why. Properly instructed parents will ask a delinquent board some pointed questions.

The Massachusetts Medical Society

MEMBERSHIP CHANGES FROM JANUARY 1 TO MARCH 1, 1924

Alphabetical list compiled by the Secretary

Note:—If Fellows will send a post card, noting change of address, to the Secretary, at 182 Walnut Street, Brookline, it will help to keep the list correct.

Honorary Members, elected by Council, February 6, 1924:

1924. Eliot, Charles William, Cambridge, 17 Fresh Pond Parkway.

1924. Keen, William Williams, Philadelphia, Pa., 1520 Spruce Street.

1924. White, Benjamin, Jamaica Plain, 375 South Street.

Fellows:

Achorn, John Warren, Pine Bluff, N. C., on retired list as of January 1, 1924.

Adler, Stuart Welsh, Winona, Minn., resigned, February 6, 1924.

Allen, Harold M., Lawrence from Bay State Building to 301 Essex Street.

1902 } 1924 } Allison, Nathaniel, Boston, Massachusetts General Hospital. (Restored by Council February 6, 1924.)

Amiral, Hiram H., Boston, 270 Commonwealth Avenue (Middlesex South to Suffolk, February 6, 1924).

Atkinson, Frederick C., North Andover, now 222 Main Street.

Bacon, Joseph A. P., Lawrence, now 121 Manton Street.

Bailey, Walter C., Woodstock, Vt., office now Boston, 95 Milk Street, Room 22.

Bartley, John J., Lawrence, now 334 Haverhill Street.

Bean, Harold C., from Belmont to Salem, 387 Essex Street.

Benner, Burnham R., Lowell, on retired list as of January 1, 1923.

Bixby, Oliver E., Lynn, now 51 Broad Street.

Blackett, Charles W., Jr., change residence from West Newton to Newtonville.

Blakely, David N., Brookline, office Boston, 95 Milk Street, Room 22.

Blood, George W., Fall River, now 122 Purchase Street.

†1871. *Bragdon, George Albert*, died at Middletown, Conn., March 20, 1921, aged 80.

Bridgman, Burt Nicholas, Durban, South Africa, resigned, February 6, 1924.

Brown, Percy, from Madison, Wis., to New York City, St. Luke's Hospital.

Buck, Robert W., Wellesley Hills, office now Boston, 374 Marlborough St.

Buckley, George A., Brockton, now 12 Cottage Street.

Burbeck, Edward K., Marblehead, now 3 Orchard Street.

1910. *Burke, George Herbert*, Springfield, died at Springfield, February 27, 1924, aged 39.

Burns, Walter L., Lynn, now 93 Franklin Street.

Butler, Richard B., Fall River, from 251 to 241 Pine Street.

Carroll, James A., Boston, 411 Marlborough Street. Change James to John.

Carroll, Thomas F., Lowell, from 219 to 267 Central Street.

Carvill, Maud, Somerville, office Boston, now 82 Commonwealth Avenue.

Casey, Chester A., Ironton, Ohio, now First National Bank Building.

Cheley, Glen Evan, Denver, Colo., resigned, February 6, 1924.

1902 } 1924 } Chrystal, Michael Henry, Leominster, 83 Main Street. (Restored by Council February 6, 1924.)

1915. *Chronquest, Alfred Peter*, died at New York City, December 31, 1923, aged 39.

Coates, Edward A., Jr., from Winthrop to Medical Corps, U. S. Army.

Cobb, Frederic C., Gloucester, Riverview, care of Rev. Dr. Pease.

Cone, Dwight E., Fall River, now 279 Osborn Street.

Cotter, Timothy F., Haverhill, now 104 Emerson Street.

Cox, Ann Caroline, North Weymouth, office Boston, 1089 Boylston Street.

Crane, Clarence, Boston, 520 Beacon Street. (Middlesex South to Suffolk, February 6, 1924.)

Crockett, Leon W., Medford, 82 High Street. (Middlesex South to Suffolk, February 6, 1924.)

Croissant, Charles A., Worcester, now 29 Pearl Street.

Cruikshank, Frank S., from West Roxbury to Dorchester, 1 Carlos Street.

Cunningham, Thomas Donald, now Denver, Colo., 820 Metropolitan Building.

Curley, John Joseph, from Worcester to Westborough, 33 South Street.

Curtis, Harlan Fuller, Charles City, Iowa, resigned, February 6, 1924.

Dahlen, Carl A., Boston, from 6 to 70 Westland Avenue.

†1882. *Daly, Bernard Thomas*, Roxbury, died at Roxbury, February 26, 1924, aged 66.

Derby, Joseph P., Springfield. Temporary address Canton, Massachusetts Hospital School.

Dickinson, Gyrdie W., Winthrop, now 8 and 9 Somerset Avenue.

Dion, Thomas J., Quincy, 59 Cross Street. Delete West.

Dodge, William W., Boston, on retired list as of January 1, 1924.

Donoghue, John Joseph, Worcester, resigned, February 6, 1924.

Dow, David C., Cambridge, from 6 Hilliard Street to 1587 Massachusetts Avenue.

Ducy, William D., Brockton, from 20 to 26 Cottage Street.

†Eddy, George S., from Newton to Winchester, 8 Ridgefield Road.

†1874. *Ela, Walter*, Cambridge, died at Cambridge, January 28, 1924, aged 75.

†Ellis, George L., Middleborough, from 135 to 339 Center Street.

Eveleth, Samuel C., Marblehead, from 29 to 32 Pleasant Street.

Fiske, Eustace L., from Croton-on-Hudson, N. Y., to Glendale, Calif., 807 East Windsor Road.

Flagg, Elisha, Boston, from 192 Marlborough Street to 55 Commonwealth Avenue.

Flett, Penelope M., Wakefield, resigned, February 6, 1924.

1914. *Foss, George Herbert*, Springfield, died at Springfield, February 29, 1924, aged 45.

Fuller, Solomon C., Boston, 220 Clarendon Street. (Middlesex South to Suffolk, February 6, 1924.)

Gaetani, Arthur L., from Dorchester to Milton, office Boston, 239 Broadway.

Gennert, Jacob, New Bedford, from 1133 to 1326 Acushnet Avenue.

Gleason, Mardis E. Change Newtonville to Newton, 123 Vernon Street.

Glickman, Alfred M., from Long Branch, N. J., to Springfield, 476 Chestnut Street.

Gordon, John H., Detroit, Mich., now 1910 Phil. N. B. Sta.

†Gordon, Stephen M., Fall River, now 229 Belmont Street.

Greenough, Clara M., from Cheney, Wash., to New York City, 106 Morningside Drive, Apt. 71.

Groh, Herman, New Bedford, now 488 Pleasant Street.

†1882. *Gruver, Samuel James*, Brockton, died at Brockton, February 21, 1924, aged 75.

Guibord, Alberta S. B., Waban, office now Boston, 210 South Street.

Gwynne, Samuel C., from Medical Corps, U. S. Army, to Worcester, 9 Elm Street.

1900. *Haines, Ignatius*, Brookline, died at Brookline, January 16, 1924, aged 52.

Hanley, Francis J., Whitman, 29 Park Street, not Avenue.

Hanson, William T., from Tewksbury to State Farm (Bridgewater).

Harvey, John Woods, Bayonne, N. J., resigned, February 6, 1924.

Heath, Elmer Hinckley, Jr., now Boston, Massachusetts General Hospital.

Hodgdon, Ralph F., Somerville, now 157 Highland Avenue.

Hodgson, John S., Boston, 144 Commonwealth Avenue. (Norfolk to Suffolk, February 6, 1924.)

Holland, John Alexander, East Gardner, deprived of the privilege of fellowship, February 6, 1924.

1911. *Honeij, James Albert*, Boston, died at Boston. January 24, 1924, aged 43.

Howard, Herbert H., Boston, from 24 Marlborough Street to 395 Commonwealth Avenue.

Howes, Seth F. H., Westborough, 72 West Main Street.

Hubbard, Eliot, Jr., from Roxbury to Cambridge, office Boston, 520 Commonwealth Avenue.

Huntington, James L., Boston, from 311 to 24 Marlborough Street.

1887. *Jones, Gilbert Norris*, Wellesley Hills, died at Wellesley Hills, January 26, 1924, aged 61.

Jones, Lyman A., Swampscott, from 80 to 269 Humphrey Street.

Kandib, Anna H., Dorchester. Temporary address New Orleans, La., U. S. Vets.' Hosp. No. 84.

Kebabjian, Hrant S., Dorchester, office Boston, 360 Commonwealth Avenue.

†1896. *Langlois, Joseph Augustus*, died at Pittsfield, his home, February 22, 1924, aged 70.

Lanigan, William N., from Worcester to Medford, 235 Main Street.

1894. *Leach, Edward Mortimer*, Rochdale, died at Rochdale. February 1, 1924, aged 54.

Learned, Elmer T., Fall River, from 46 to 42 Franklin Street.

Levine, Samuel A., from Brookline to Roxbury, office Boston, 270 Commonwealth Avenue.

Lichtenthaeler, Marguerite E., Wellesley Hills, 111 Washington Street. (Norfolk to Suffolk, February 6, 1924.)

Lipsitt, Charles S., New Bedford, from 283 to 285 Pleasant Street.

Livingston, Ernest G., Lowell, now 10 Merrimack Square.

Loewe, Leonard Joseph, Higganum, Conn., deprived of the privilege of fellowship February 6, 1924.

1901. *Lowell, Freeman Lamprey*, Boston, died at Arlington, February 21, 1924, aged 52.

Lynch, Clement Foote. Middle name omitted in Directory.

MacKnight, William F., Fall River, from 829 to 591 Middle Street.

MacPherson, Donald J., from Boston to Brookline, 30 Coolidge Street. Temporary address Palmyra, N. Y.

Maney, John J., Lawrence, now 26A Eutaw Street.

Mangan, John J., Lynn, now 12 Baker Street.

Manoogian, Bryant J., Peabody, from 85 Main Street to 16 Washington Street.

Mansfield, Burleigh B., Ipswich, now 4 Greene Street.

†*Marcy, Henry Orlando*, Cambridge, died at Cambridge, January 1, 1924, aged 86.

McClintock, Elsie, Hillside, N. J., resigned, February 6, 1924.

McDonald, John F., Lynn, now 139 Chestnut Street.

McLellan, William E., Buffalo, N. Y., Room 228, Federal Building.

Meredith, Florence L., Watertown, office Northampton, Smith College.

Merrill, Charles H., Lynn, now 29 Broad Street.

Millet, Charles S., Brockton, from 23 to 196 Main Street.

Milot, Wilfrid F., Fall River, from 1100 to 1017 Stafford Road.

Mixter, Samuel J., Boston, from 180 Marlborough Street to 219 Beacon Street.

Mixter, William J., Boston, 270 Commonwealth Avenue. (Norfolk to Suffolk, February 6, 1924.)

1873. *Morris, Michael Augustine*, Charlestown, died at Charlestown, February 18, 1924, aged 72.

Moses, Alvin R., from Worcester to Charlton.

Mudd, Stuart, Cambridge, resigned, February 6, 1924.

Nye, Robert N., from Forest Hills to Brookline, 295 Clinton Road. (Norfolk to Suffolk, February 6, 1924.)

O'Brien, John Francis, Fall River, now 548 South Main Street.

1899. *O'Sullivan, John Joseph*, Lawrence, died at Lawrence, February 17, 1924, aged 52.

O'Toole, John L., Bradford, from 112 to 200 Main Street.

Paquin, Joseph U., New Bedford, from 1304 to 1306 Acushnet Avenue.

Parker, George L., from Springfield to Northampton, State Hospital.

Parmelee, William J., Springfield, on retired list as of January 1, 1923.

†1883. *Perry, George Lewis*, Athol, died at Athol, January 13, 1924, aged 74.

Peterson, Arthur F., Brockton, now 23 Main Street.

Pettey, John A., Brockton, now 31 West Elm Street.

Phaneuf, Louis E., Boston, from 514 to 395 Commonwealth Avenue.

Phillips, Charles H., from Alhambra, Calif., to Beverly, 25 Hale Street.

1890. *Plummer, Edward Marwick*, Charlestown, died at South Boston, January 3, 1924, aged 67.

Potter, Lester F., New Bedford, now 68 Walnut Street.

Poute, Joseph Perry, Jr., New Bedford. Change name to Ponte.

Randall, Francis D., Tampa, Fla., 507 Lambright Street.

Reese, John A., Attleborough, 7 Park Street, Sanford Building.

Renaud, Ulric J., Brockton, now 63 Main Street.

Rice, Harry E., Springfield, from 4 to 6 Maple Street.

Richardson, Anna G., Boston, 22 Evans Way. (Norfolk to Suffolk, February 6, 1924.)

Ripley, Frederick J., Brockton, from 965 to 956 Belmont Street, on retired list as of January 1, 1924.

Ritvo, Max, Dorchester, office Boston, from 465 Beacon Street to 491 Commonwealth Avenue.

Schadt, George L., Springfield, now 121 Chestnut Street.

Schloss, Oscar Menderson, New York City, resigned, February 6, 1924.

Senesac, Archibald N., New Bedford, now 1007 South Water Street.

1914. Shapira, Victor Isaiah, Boston, 156 Huntington Avenue. (Norfolk to Suffolk, June 18, 1918.) Name omitted from Directory through error.

Shatswell, James A., Beverly, now 221 Cabot Street.

Sisson, Warren R., Boston, 293 Marlborough Street to 270 Commonwealth Avenue.

Smith, Roy Welles, Petersham. (Worcester North to Worcester, February 6, 1924.)

Spiva, Charles. New Bedford. Change 1608 to 1680 Acushnet Avenue.

Stone, Jane G., from Stoneham to Brighton (Boston), 196 Lake Street.

Story, Theodore L., from Hartford, Conn., to Holden, Main Street.

Stowell, Frank E., Worcester, from 14 to 29 Pearl Street.
Suarez, Jemaro, Porto Rico, from Isabella to Santuce, 37 Cerra Street.
Swan, Lawrence C., Beverly, now 23 Bow Street.
Tennis, Matthew N., Fall River, now 171 Madison Street.
Thorndike, William T. S., Boston, 24 Marlborough Street. (Norfolk to Suffolk, February 6, 1924.)
Tolman, Henry, Salem, from 113 to 130 Federal Street.
Trueman, Harmon S., Somerville, on retired list as of January 1, 1924.
Tuholski, David B., Brockton, 105 to 137 Main Street.
Varney, Fred E., North Chelmsford. Temporary address Westerleigh, Staten Island, N. Y., 180 Kingsley Avenue.
Wallace, Alonzo S., from Nashua to Hudson, N. H., P. O. Box 364.
Wein, Barnet M., from Roxbury to Lynn, office Boston, 353 Commonwealth Avenue.
Weiser, Walter R., from Springfield to Daytona, Fla., 525 South Ridgewood Avenue.
Weyher, Russell F., Detroit, Mich., now 4508 West Warren Avenue.
Whelan, Edmond V., Springfield, now 254 North Main Street.
White, George A., Cambridge, now 6 Maple Avenue.
Withington, Alfreda B., Pittsfield, now South Street Apartments.
Wright, William F., Fall River, now 162 Bank Street.
Zechurn, Isolde Therese, name should be Zeckwer, Dorchester, office Roxbury, 240 Longwood Avenue.

◆

Current Literature Department

ABSTRACTORS

Gerardo M. Balboni
William B. Breed
Laurence D. Chapin
Austin W. Cheever
Randall Clifford
Isador Coriat
Ernest M. Daland
Maurice Fremont-Smith
Horace Gray
Robert M. Green
John B. Hawes, 2d.
John S. Hodgson
Fred S. Hopkins
Chester M. Jones
Charles D. Lawrence
Tracy Mallory
Herman A. Osgood
Francis W. Palfrey
Edward H. Risley
George C. Shattuck
William H. Shedden
Warren R. Sisson
George G. Smith
Wilder Tileston
Henry R. Viets
Bryant D. Wetherell

Protein Sensitization in Isoskingrafting

Holman, E. (*Surgery, Gynecology & Obstetrics*, January, 1924), presents the extremely interesting case of a child, the whole skin of whose leg was destroyed in an automobile accident, and who was grafted at two different sittings by pin-point grafts from the mother. These grafts seemingly took splendidly for about three weeks, at which time an extensive universal exfoliative dermatitis occurred and was only relieved by curetting away the isografts. Later, autografts from the patient's other thigh succeeded in relieving the condition and the child recovered. The author makes the following interesting and pointed comment upon this case:

"Our experiences with isografting, therefore, prompt us to recognize and stress a principle in isografting which has heretofore received scant attention and little emphasis, namely, the possibility of sensitizing the patient to the foreign protein of the graft. If a similar protein is again introduced, or if the original graft spreads, one is very likely to encounter the danger of a protein poisoning, a reaction comparable but probably not identical with that of anaphylaxis. This protein sensitization or poisoning may manifest itself by a general reaction, as in our first case, or only by a gradual disintegration of the foreign transplant as in our second case.

"Our observations also prompt us to question very strongly the value and wisdom of ever attempting isografts when there is any skin available for autografts. Certainly if one set of grafts melts away, it would be sheer folly to attempt further isografting from that same donor, and probably also from any donor. Our experience also furnishes contributory evidence to the claim that successful isografts exist only in fable and not in fact."

[E. H. R.]

Experience with One Thousand Cases of Abortion

Hillis, D. S. (*Surgery, Gynecology & Obstetrics*, January, 1924), analyzes the results in cases seen in the Cook County Hospital, between July, 1920, and March, 1923, and, after tabulating and grouping cases, he draws the following conclusions:

1. Conservative treatment of abortion in febrile cases gives better results than active therapy.
2. Febrile patients who have a five-day afebrile period have a greater tendency to continue a normal temperature after curettage than those who are operated upon before the end of this period.
3. Afebrile patients with a five-day observation period have a greater tendency to remain with a normal temperature than do those who are curetted before the end of this rest period.
4. Approximately 6.2 per cent. of patients must be emptied because of alarming haemorrhage.
5. A plan of procedure which embodies a conservative rest period of 5 days' normal temperature for febrile and afebrile patients and results in as low a mortality as quoted in this paper seems to be a rational method for the treatment of abortion.

[E. H. R.]

Cystin Nephrolithiasis

Crowell, A. J. (*Surgery, Gynecology & Obstetrics*, Jan., 1924), reports a case with x-ray demonstration of the disintegration of a cystin stone by alkalinization and concludes that the etiology of the disease is still unsolved but probably is due to faulty metabolism: that the urine should be examined for cystin in all cases of back pains and renal colic whether or not they are accompanied by kidney x-ray shadows: that, if the stone is associated with cystinuria, disintegration should be attempted by the internal administration of alkalies, pelvic lavage with alkaline solutions, and limitation of protein diet.

[E. H. R.]

Adenoids and Posture

Wills and Warwich (*Quar. Jour. of Medicine*, Jan., 1924) correlate the histological picture of adenoids removed at operation with the clinical findings.

The authors state that the adenoids removed may be divided into two groups. In the first the changes are due to inflammation, acute or chronic. The germinal centers of the follicles are indistinct, and are surrounded by a very heavy ring of lymphocytes, while the interstitial tissue shows increase of fibrous tissue, thickening of the blood vessels and plasma cells.

In the second group there is simple hypertrophy with marked increase in the size of the follicles, the germinal centers being very large, while the surrounding rim of lymphocytes is narrow. Numerous phagocytic endothelial cells are seen in the centers. In some cases the signs of inflammation are superadded.

In studying the posture of these children, the following interesting observations were made: In those children with normal posture, 83 per cent. showed simple inflammation of the adenoids, and 17 per cent. had hypertrophy. In the children with faulty posture (exaggerated spinal curves and protuberant lower abdomen) the reverse was the case, 82.5 per cent. showed hypertrophied adenoids and 17.5 per cent. inflammatory changes. These differences are so striking that there seems to be no doubt that the association of faulty posture and hypotonus with simple hypertrophy of the adenoid tissue is not merely one of chance, though the pathogenesis remains obscure.

The "adenoid facies" was found by the authors to be related to intranasal obstruction, and was met with sometimes in the absence of adenoids. The deformities of the chest which are ascribed to adenoids, such as pigeon breast, Harrison's groove, and winged scapula, were always associated in this series with rickets, to which they are probably due in part.

[W. T.]

THE OPERATION OF CARDIOLYSIS FOR ADHERENT PERICARDIUM

BOURNE (*Quar. Jour. of Medicine*, Jan., 1924) reports two cases in children in which this operation was done with very favorable results, and reviews 23 cases from the literature. About 80 per cent. were of rheumatic origin, the remainder were tuberculous.

The operation applies only to those cases in which the pericardium is adherent to the chest wall, and consists in the removal of those portions of the third, fourth and fifth ribs which overlie the heart. The immediate mortality was 4 per cent., or, including a patient dying 20 days after operation, 8 per cent.

Adherent pericardium should be suspected in all cases with marked cardiac hypertrophy which is not readily explainable on other grounds, particularly if there is a history of a previous attack of pericarditis. The mechanical embarrassment due to the adhesions manifests itself chiefly on effort, so that many of these patients suffer no distress so long as they keep quiet. Cyanosis and dyspnea, and in the later stages ascites, are the leading symptoms. The most important physical signs are periapical retraction of the chest wall, and fixation of the apex beat, so that it doesn't move with change of position. The liver is frequently enlarged, and ascites may be present without edema of the legs. The fixation of the heart may be demonstrated also by taking electrocardiographs in the dorsal and both lateral positions, when the usual changes in the curves shown by movable hearts will not take place.

Cardiolysis is indicated in cases where there are signs of failure of compensation and the underlying rheumatic or tuberculous infection is not progressive. Mitral stenosis and auricular fibrillation are not contraindications.

The results in the reported cases, most of which were advanced, were quite good, many of the patients regaining ability to work, and losing their ascites.

The author pleads for an earlier performance of the operation.

[W. T.]

PSORIASIS AND ARTHRITIS

GARROD and **EVANS** (*Quar. Jour. of Medicine*, Jan., 1924) report three cases in which these conditions were associated, and believe that both depend upon a common cause. The reason for this belief is the fact that attacks of polyarthritis coincide with recurrences of the skin disease, and often disappear completely with the eruption. Moreover, the usual causes of arthritis are absent in these cases. Periods of amenorrhea were noted in two of the cases, occurring during exacerbations of the joint trouble. Two cases were unusual in that they showed intermittent hydrarthrosis of the knees. [W. T.]

STUDIES OF EXOPHTHALMIC GOITER AND THE INVOLUNTARY NERVOUS SYSTEM

HYMAN, H. T., AND KESSEL, L. (*Archives of Surgery*, January, 1924), present an article based on the subjective and objective manifestations in fifty unselected patients observed over a period of two years in whom no specific therapeutic measures were instituted. This was done in order to determine the natural history of the disease, or the spontaneous course. Patients were observed in the general wards of the hospital. No special medication or treatment was given except in a general way. An effort was made to keep them reasonably quiet and free from psychic shock. From their observations, they draw the following conclusions:

1. Subjectively, on a basis of economic restitution, and on the basis of objective findings, it is fair to say that, in the vast majority of patients with exophthalmic goiter, there was a marked and progressively increasing tendency toward "spontaneous" recovery.
2. Recovery was not complete in the sense of cure, but was marked by the persistence of residual subjective symptoms. These residual symptoms did not interfere with economic restitution.
3. In at least the first two years of the remissions, the occurrence of severe incapacitating exacerbations was infrequent.
4. These results of "skilful neglect" compare favorably with the results of specific therapeutic measures.
5. In order that the efficacy of a specific therapeutic procedure may be demonstrated, the following postulates must be met:
   (a) A series of consecutive cases must be reported.
   (b) The diagnosis must be confirmed by a continuous and marked elevation of the basal metabolism.
   (c) The results must be collected on the basis of (1) subjective symptoms, (2) economic restitution and (3) objective findings, particularly basal metabolism.
   (d) The specific therapeutic measure must result in a clear-cut amelioration over and above the expectancy in the spontaneous course. [E. H. R.]

TWENTY-SECOND REPORT OF PROGRESS IN ORTHOPEDIC SURGERY

OSGOOD, R. B., ALLISON, N., SOUTTER, R., LOW, H. C., DANFORTH, M. S., BUCHOLZ, C. H., BROWN, L. T., WILSON, P. D., AND SMITH-PETERSEN, M. N. (*Archives of Surgery*, Jan., 1924), present a very characteristically complete, well-written, and concise report on progress, bringing the various subjects discussed well up to date. [E. H. R.]

ARCHIVES OF SURGERY
January, 1924, Part Two

This whole volume of 209 pages is devoted to the pathology and surgery of conditions within the chest, and forms an excellent symposium on a rather rare group of diseases. It contains the following articles:

"Suppuration in the Posterior Mediastinum," with description of operative approach through the base of the neck, and also demonstrates the advantages of the use of bismuth paste in making diagnosis.

An article on the "Value of the Lateral Projection in the X-ray Examination of the Chest, with Special Reference to Surgical Treatment of Abscess of the Lung."

Description of the operation for acute empyema on physiologic lines, well illustrated.

Report of case of malignant tumor of the lung with operation.

A short article on "Intracardiac Surgery."

Two articles on pneumothorax.

An article on intrapleural tension, experimental in character.

A description of graded extrapleural thoracoplasty in the treatment of diffuse unilateral bronchiectasis, a discussion of the question of bronchiectatic pulmonary abscess simulating apical tuberculosis.

A report on experimental closure of the large bronchi. [E. H. R.]

Endothermy in the Treatment of Accessible Neoplastic Diseases

Wyeth, G. A. (*Annals of Surgery*, January, 1924), speaks of the use of endothermy, by which he means the use of electric heat not strong enough to cauterize and not in the nature of fulguration. The degree of heat and the manner of treatment is reached through electric current which desiccates but does not actually cauterize the tissue. The author shows photographs and eleven cases treated by this method very successfully and without scar on surface of face. The method evidently requires considerable experience to render it successful, but should be specially applicable to regions like the face where little scarring is desired. [E. H. R.]

The Study of Focal Infection and Elective Localization in Ulcer of the Stomach and in Arthritis

Nakamura, T. (*Annals of Surgery*, January, 1924), presents largely an experimental study and states in conclusion that the tonsils of patients suffering from ulcer of the stomach and arthritis commonly harbor streptococci which tend to localize, respectively, in the mucous membrane of the stomach and in the joints of animals, and produce ulcer and arthritis in them, which is not true of streptococci in the tonsils of normal persons. Hence, it may be concluded that foci of infection harboring streptococci having elective localizing power are important factors in the primary cause and the persistence of ulcer of the stomach and arthritis. [E. H. R.]

Artificial Pneumothorax

Gravesen (*Ind. Med. Gazette*, Nov., 1923), discusses his experience with artificial pneumothorax and other surgical procedures in 90 cases of advanced pulmonary and pleural tuberculosis. Artificial pneumothorax, when successful, acts in four ways:

1. Retraction of the lung favors natural healing.
2. Compression of the lung brings ulcerating walls together and transforms a discharging cavity into a solid scar.
3. Immobilization of the lung stops the advance of the process.
4. Collapse of the lung leaves the organ in a condition of venous and lymphatic stasis. Through venous stasis the lung benefits by the same factors as in Bier's treatment, while lymphatic stasis explains the very striking disintoxication occasionally observed.

The writer's 90 cases were all advanced and of types which do not respond to routine sanatorium treatment in India. Of the 90 cases, 28 could not be treated by artificial pneumothorax because of universal adhesions; 8 were so recent that it is too early to discuss results. Of the remaining 54, treated by artificial pneumothorax, 34 were not benefited; in the other 20 cases treatment has been successful.

The writer believes that the principles of treatment for pleural effusions will have to be revised in the light of knowledge gained through pneumothorax work. An effusion can check a pulmonary process just as a pneumothorax can, and in certain cases is best left without aspiration. [L. D. C.]

Gumma of the Breast: Its Differential Diagnosis from Carcinoma

Adair, F. E. (*Annals of Surgery*, January, 1924), gives the history of one case in detail and then proceeds to describe the various symptoms and signs which would differentiate gumma from carcinoma. [E. H. R.]

Acute Perforated Ulcer of the Stomach and Duodenum

McGreery, J. A. (*Annals of Surgery*, January, 1924), reports on a series of cases and draws the following conclusions:

In this series of twenty-five cases, shock has been an unimportant factor. It was not present in three of four cases perforating under observation.

Immediate gastro-enterostomy has not affected the mortality, there having been no deaths in the cases in which this operation was performed.

Intra-peritoneal drainage is rarely necessary in early cases.

The most satisfactory results to date have been in the duodenal group with gastro-enterostomy either primary or delayed. Six of seven cases treated this way are symptom-free, the remaining one improved.

Ulcers of the body of the stomach treated by single closure have also given satisfactory results.

The pyloric ulcers have been the least satisfactory, only one of four patients followed over a year being symptom-free.

Operative stenosis can be disregarded as an indication for gastro-enterostomy, unless complete.

Gastro-enterostomy is indicated in perforated duodenal ulcer, with surrounding infiltration, provided the patient's condition permits the additional time necessary for that procedure. In the perforated ulcer without infiltration closure alone may be adequate, and gastro-enterostomy should be postponed. [E. H. R.]

Epidemic Hiccup and Encephalitis Lethargica

Brain, W. R. (*Brit. Med. Jour.*, Nov. 10, 1923), reports an interesting case of encephalitis lethargica which was preceded for a month by intermittent attacks of hiccup. He says that it is not surprising that the epidemics of hiccup and myoclonic encephalitis should have coincided in 1919, since hiccup is probably a myoclonus of the diaphragm. [R. C.]

Melanosis

Spencer, W. G. (*Brit. Med. Jour.*, Nov. 17, 1923), in writing of melanosis, concludes as follows: Experience incident to the removal of a large number of melanomas is similar to that in connection with other varieties of new growths. Free and early incision is not followed by recurrence *in situ* except in malignant cases where the disease has already spread widely. Simultaneously with the change from melanoma to melanotic cancer there is a detachment and degeneration of cells producing metastasis which exhibits itself later on. [R. C.]

Angina Pectoris: Some Points in Prognosis

Hay, J. (*Brit. Med. Jour.*, Nov. 24, 1923), discussing the prognosis of angina pectoris, emphasizes the value of the electro-cardiograph, believing that the mortality in angina pectoris varies with the health of the myocardium. He thinks that we should view with suspicion everyone over middle age whose "indigestion" is induced by effort or exposure to cold, and fades away on the cessation of stress or when the patient gets comfortably warm; and believes that the prognosis is often at fault because the significance of some of the slight and earlier manifestations are misinterpreted. [R. C.]

Discussion on the Treatment of Acute Primary Infections of the Hand

Wilkie, D. P. D. (*Brit. Med. Jour.*, Dec. 1, 1923), in a discussion on the treatment of acute primary infections of the hand, summarizes his conclusions as follows: Early accurate diagnosis is the crux of the management of hand infections.

For lymph infection without suppuration the treatment should be on essentially conservative lines.

For suppurative infection in tissue spaces or tendon sheaths prompt and free drainage with early systematic functional exercises should be the guiding principles. [R. C.]

DISCUSSION ON THE SEQUELAE OF LETHARGIC ENCEPHALITIS

BUZZARD, E. F. (*Brit. Med. Jour.*, Dec. 8, 1923), discussing the sequelae of lethargic encephalitis, says that the chief problem we have to face is that of treating such serious disabilities as epilepsy, involuntary movements, and the distressing disability associated with the Parkinsonian syndrome. The treatment of post-encephalitic epilepsy requires no special comment. In the main it is medicinal, but there are occasional cases in which the symptoms point to a definite focal lesion and in which the question of surgical intervention must be considered. He has seen meningeal cysts following encephalitis productive of Jacksonian epilepsy and cured by surgery. [R. C.]

SYPHILIS AS A COMPLICATION OF TUBERCULOSIS

BOWMAN, A. K. (*The Lancet*, Dec. 15, 1923), discussing syphilis as a complication of tuberculosis, gives the following conclusions:

1. From a consideration of limited data the incidence of a positive W. R. has not been found to be more frequent among the tuberculous than among the general population.
2. Syphilis of the lungs existing as an isolated disease is extremely rare, but it may be that a number of cases recognized as pulmonary tuberculosis and in which the W. R. is positive are in reality cases of combined syphilis and tuberculosis of the lungs.
3. The two diseases when coexistent in the same individual may modify each other.
4. In cases in which syphilis and tuberculosis are present in the same individual, the administration of 606 and its analogues may be followed by disaster. If organic arsenic is used, it should be administered in extremely small doses and at wide intervals. If no disturbance follows the infections, treatment may be continued cautiously, but it should be at least temporarily suspended if focal or general reactions occur and the condition carefully watched.
5. Organic arsenic compounds may be useful in cases in which the diagnosis is doubtful, but it is unjustifiable to employ them for diagnostic purposes save with extreme care, and always having in mind the possibility of a tuberculous flare-up. [R. C.]

UNSUSPECTED NASAL SINUS DISEASE

JOBSON, T. B. (*The Lancet*, Nov. 10, 1923), stresses the importance of the examination of the nasal sinuses as a source of unsuspected focus of infection. He gives several very interesting and illustrative cases. [R. C.]

THE SURGERY OF THE PITUITARY BODY

FRAZIER, C. H. (*Archives of Surgery*, Jan., 1924), presents a concise yet very complete article on this subject and says in conclusion:

"In this cursory review, I have attempted to present the clinical features of interest in the study of pituitary disorder, dwelling especially on the visual disturbances, because of their outstanding importance. The relative merits of glandular therapy, irradiation and operation have been presented in an impartial way. The indications for operation, the successes and failures have been clearly set forth. That surgical intervention offers an assurance not only of the arrest of visual deterioration, but also of improvement in a considerable proportion of cases, has been established. That the combination of operation and irradiation will prolong the period of relief or prevent recurrence is considered more than probable, although a number of years must elapse in the cases presented before this forecast can be confirmed. That there has been needless delay in establishing a diagnosis is conclusively illustrated by the prevalence of optic atrophy eventuating in total blindness in one eye in more than 40 per cent. of our cases; and, conversely, that better results may be anticipated if the lesion is recognized sooner must be admitted. Since Hirsch first proposed the transsphenoidal operation in 1910, there has been a continuous reduction in mortality, so that today the operation is devoid of serious risk." [E. H. R.]

RHEUMATIC CARDITIS

RAVEN, M. O. (*The Lancet*, Dec. 8, 1923), emphasizes the importance of constant supervision of the heart in the early stages of the disease, as in some cases the child does not feel ill at all until the heart has suffered irretrievable damage. He states that in rheumatic disease it generally appears that a much larger outlook has to be taken of the time-element necessary to effect a cure. [R. C.]

THE IMMEDIATE EFFECT OF SUBTOTAL THYROIDECTOMY IN TOXIC GOITER

SEGALL, H. N., and MEANS, J. H. (*Archives of Surgery*, Jan., 1924), writes as follows:

"The early effects of operations amounting to subtotal thyroidectomy in patients with toxic goiters are: 1. In the twenty-four hours after operation, a rise in basal metabolism and pulse which can be explained largely on the basis of fever and emotion. 2. Following this initial rise, a progressive fall in metabolism and pulse which brings them within normal limits in from four to twelve days.

"From the studies here reported, it is further concluded that: 3. The rate of detoxication following subtotal thyroidectomy is quite similar to that during the period of recovery from hyperthyroidism induced by thyroid feeding. 4. Since the detoxication rates of individual patients following subtotal thyroidectomy or its equivalent are in the main parallel with one another, the length of time required for detoxication will depend on the intensity of the preoperative intoxication. 5. While pulse and basal metabolism show considerable parallelism, the latter fluctuates less and is the better index of the degree of hyperthyroidism. 6. The slight rise in pulse and metabolism which usually occurs in the morning just before operation is due to an increase in emotional tension, and very likely a resulting increase in liberation of epinephrin." [E. H. R.]

TUMORS OF THE EPIDIDYMIS, SPERMATIC CORD AND TESTICULAR TUNICS

HINMAN, F., AND GIBSON, T. E. (*Archives of Surgery*, January, 1924), state that:

1. The extreme rarity of new growths in the epididymis, spermatic cord and testicular tunics, and the lack of attention accorded them, particularly in this country, emphasizes the importance of recording new cases and reviewing comprehensively those already reported.
2. The case of the spermatic cord and the two cases of epithelial neoplasm of the epididymis are reported because of their unusual features and extreme rarity.
3. The comprehensive classification of tumors of the spermatic cord, epididymis and testicular tunics is the first to be submitted.
4. A review of the literature reveals the fact that, of tumors involving these three structures, tumors of

the spermatic cord are most frequent, constituting perhaps 90 per cent. or more of the entire group.

5. The relative frequency of tumors of the cord is of interest in that lipomas are most frequently met with, and sarcoma stands a close second. Dermoids, fibromas and myomas are next in order of frequency.

(*a*) Lipoma is to be differentiated from fat hernia, which is much more common, and which may contain a peritoneal sac and constitute a source of danger for the surgeon.

(*b*) Sarcoma, with the exception of lipoma, is the most frequent tumor of the cord. They represent at least 24.7 per cent. of all cord tumors. Their clinical picture is similar to that of teratoma testis, and they apparently arise frequently from benign conditions.

(*c*) Fibroma of the cord occurs about one third as often as lipoma. It apparently arises in most instances from the cord near its junction with the epididymis. Trauma is rarely mentioned as a factor in their development. Myxoma and leiomyoma are extremely rare in the cord.

(*d*) Dermoid cysts are of approximately the same frequency as fibroma. They are all of the simple type. Their origin offers difficulties in explanation.

6. As regards tumors of the epididymis, sarcoma is again the most frequently occurring neoplasm, and at least ten authentic cases have been reported. Only one case of lipoma is reported, the reason probably lying in the fact that the epididymis normally contains no fat. Six cases of leiomyomas and four cases of carcinoma, including a personal case, may be considered as authentic. No dermoids, fibromas or myxomas have been found in the literature of authentic nature.

7. Four authentic cases of fibromas of the tunica albuginea are tabulated. No sarcomas are reported. A single authentic instance of lipoma of the tunica vaginalis has been found. Approximately, thirteen cases of fibromas, two of rhabdomyomas and twelve of sarcomas of the tunica vaginalis have been reported. Epithelial neoplasms are of extreme rarity; two cases of adenomatous tumors and another reported as lymphangio-endothelioma are probably the only acceptable cases of growths of this nature.

8. Particularly significant is the relative frequency of growths of malignant nature in the spermatic cord, epididymis and testicular tunics, sarcoma constituting the type most frequently encountered in these structures as a whole, with possibly the single exception of lipomas of the cord.

9. Diagnosis is not only as to benignancy or malignancy, but also as regards differentiation from other conditions, involves the careful consideration of many factors, depending on the history, clinical findings, operative findings and, not infrequently, the histologic findings. Lipomas and dermoids commonly occupy the inguinal canal, while other types of tumors are generally intrascrotal.

10. Benign tumors should be awarded the treatment that they receive elsewhere. Malignant tumors, however, since they follow the course of testicular tumors, and metastasize to the same primary lymph zones retroperitoneally along the aorta and vena cava, should be accorded the same radical treatment.

[E. H. R.]

A METHOD OF ESTIMATING THE EXTENSIVENESS OF LESIONS (BURNS AND SCALDS) BASED ON SURFACE AREA PROPORTIONS

BERKOW, S. G. (*Archives of Surgery*, Jan., 1924), has worked out a large number of percentage tables and the concluding page of his article describes briefly how one may quickly get to accurately measure the extent of injured surface. This method seems simpler than most of those formerly proposed for such conditions and, carried out consistently in all cases, would be of considerable value. [E. H. R.]

THE MONO-OSTEITIC TYPE OF PAGET'S DISEASE OF THE BONE

NEWTON, F. C. (*Archives of Surgery*, Jan., 1924), reports three cases, illustrating his article with photographs and x-ray plates, and states in conclusion that Paget's disease of bone (osteitis deformans), an unmistakable disorder in its outspoken form, is nevertheless a rare disease. The so-called mono-osteitic type is still more uncommon. When, however, it appears, it presents in a single bone exactly the same clinical picture and roentgenographic findings which are present in the generalized form. While it seems possible adequately to differentiate this type from other single bone lesions, until more information is forthcoming we must content ourselves with the view that these cases are possibly nothing more than localized expressions of the better known, more generalized disease. [E. H. R.]

ARM AND CHEST ADHESIONS

DAVIS, J. S. (*Archives of Surgery*, Jan., 1924), presents his usual carefully written and clearly described paper on brachio-thoracic adhesions and axillary webs. The article is adequately illustrated with many photographs, and really forms an excellent little monograph on this particular branch of plastic surgery.

He calls especial attention to the importance of preliminary care to build up the general health of the patients to increase their hemoglobin before operation, especially in children who are always very much exhausted after the distressing effects of severe burns or other injuries which produce contraction. He frankly states that the keloidal scar may be made much softer and more pliable by careful treatment with radium or x-ray, and in certain cases such treatments are worth while before operative procedure is commenced. Davis has had no success whatsoever with fibrolysin.

He describes in detail the various incisions, types of skin graft, dressing, and post-operative treatment necessary in such cases, and states that there is no single operative procedure which is applicable to the treatment of all types of axillary webs. It is seldom that the deformity, if in any way extensive, can be reduced by one operation; in fact, in nearly all cases several operations are necessary to restore function completely, and in each of the secondary operations new problems are presented which may require different methods of attack.

The only test of efficiency of any of the operations is time, and the ultimate result cannot be determined until at least one year has elapsed after the final operation. [E. H. R.]

CHRONIC DYSPEPSIAS OF WOMEN

WALTON, A. J. (*The Lancet*, Dec. 22, 1923), in a discussion of chronic dyspepsias of women, based on ptosis, is of the opinion that resection of some portion of the intestinal tract is an operation which should be limited to extreme cases in which the colon is not only low but also very atonic.

[R. C.]

PNEUMOCOCCAL INFECTIONS: THE BACTERIOLOGICAL ASPECT

DIBLE, J. H. (*The Lancet*, Jan. 5, 1924), discussing the bacteriology of pneumococcal infections, is of the opinion that the steady intoxication of a pneumonia is abruptly terminated by the steep and sometimes dramatic rise of antibodies which may be expected just at the time at which crisis takes place, and that where the curve of antibody rise cuts the curve of toxin concentration, there crisis occurs.

[R. C.]

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THE SCARLET FEVER MYSTERY SOLVED?

The last few months have presented a striking series of developments in the study of the etiology, diagnosis, and treatment of scarlet fever. Dick, George F., and Dick, Gladys Henry (*Jour. Amer. Med. Assn.*, 81-166, October 6, 1923), initiated the resolution by reporting their work on experimental scarlet fever. Cultures were made from pus from an infected finger of a nurse who had been taking care of a scarlet fever patient. Later this nurse developed mild typical scarlet fever. The cultures from the finger showed hemolytic streptococci and diphtheroid bacilli. The streptococcus was isolated and five volunteers were inoculated by swabbing the tonsils and pharynx with four-day-old cultures of this organism. Three experiments were entirely negative, but the other two volunteers developed typical mild scarlet fever. Five volunteers also were inoculated in the same manner with Berkefeld filtrates from the cultures and all remained well. The conclusion is that those cases were probably caused by a hemolytic streptococcus or a closely associated unrecognized organism which did not pass through the Berkefeld V filter. The authors felt, however, that the conclusion was not warranted that all cases of scarlet fever are caused by the streptococcus described.

The same investigators in a later communication (*Jour. Amer. Med. Assn.*, 82: 265, January 26, 1924) describe a skin test for susceptibility to scarlet fever. In this skin test the same filtrate of the hemolytic streptococcus previously described was employed. The intracutaneous injection of this filtrate was followed by an inflammatory reaction more frequently in persons who gave no history of scarlet fever than in those convalescing from the disease. Positive reactions began to appear in from four to six hours after inoculation, and consisted at first of a small, circular area of erythema of which the maximum size and intensity was reached between eighteen and thirty-six hours after the injection. After forty-eight hours or less the reaction began to subside, leaving only a faintly yellow area. This area sometimes desquamated during the next week or ten days. It was found that the filtrate gave positive reactions in 41.6 per cent. of the persons who had no history of scarlet fever. All of the convalescent patients tested gave negative or only slightly positive reactions.

The action was inhibited by convalescent scarlet fever serum mixed with the filtrate before it was injected, or given intramuscularly before the test was made. In two instances in which it was possible to make observations, the test was positive before and negative after an attack of scarlet fever.

In a third report by Dick and Dick (*Jour. Amer. Med. Assn.*, 82: 301, January 26, 1924) a strain of streptococcus was selected that did not, unlike the original strain, ferment mannite. Two volunteers were chosen, one with a negative and one with a positive reaction to the original filtrate. The volunteer with a negative skin test remained well; the other contracted scarlet fever. Thus the authors find that they have fulfilled Koch's postulates and feel that they can announce definitely that the streptococci used in these experiments cause scarlet fever.

A fourth communication by these authors (*Jour. Amer. Med. Assn.*, 82: 544, February 16, 1924) reports the results of preventive immunization with scarlet fever toxin. Five volunteers showing positive skin tests were injected with the filtrate. All had constitutional reactions with rashes resembling scarlet fever. The subsequent skin tests were negative or greatly modified. Moreover, the blood serum of these individuals after injection neutralized the toxic substance in the filtrate.

Dochez, A. R., and Sherman, Lillian, in this same number (*Jour. Amer. Med. Assn.*, 82: 542, February 16, 1924), report on the significance of streptococcus hemolyticus in scarlet fever. Its probable similarity to diphtheria is stressed, Dochez believing scarlet fever to be a local infection producing a toxin. There has been difficulty experienced in inoculating animals with scarlet fever, due probably to the various strains of streptococcus existing. A horse, however, was finally immunized, and its serum found to cause local permanent disappearance of the rash in scarlet fever, as does convalescent serum (Schultz-Charlton reaction). Erythematous rashes occurring in other conditions are not blanched by the serum. Normal horse serum does not cause the blanching. Therapeutically in human cases the serum has been successful in modifying the disease to a marked degree.

Dochez's conclusions are well worth recording:

"Streptococcus hemolyticus is present in the throat at some time during the course of the disease in every instance of scarlet fever. This streptococcus constitutes a specific biologic type, and is not found in septic conditions other than scarlet fever."

"By inoculation of guinea-pigs with this streptococcus, a disease resembling scarlet fever in its main features can be produced."

"Immunization of the horse to the streptococcus in question gives rise to an antiserum which possesses the capacity to blanch the rash locally in scarlet fever and which, when used therapeutically, causes a marked abatement of all the symptoms. But slight evidence of the production of a toxin *in vitro* has been obtained up to the present time."

"From the results detailed, it would seem that a specific streptococcus is the cause of scarlet fever, that the disease in its principal characteristics resembles diphtheria, and that both the natural immunity in human beings and the experimental immunity developed by inoculation of animals are antitoxic in nature."

The final link in the present chain of evidence is supplied by Blake, Francis G., Trask, James D., Jr., and Lynch, J. F. (*Jour. Amer. Med. Assn.*, 82: 712, March 1, 1924). Working with the serum elaborated by Dochez, they found that of twenty-three rash extinction tests performed on thirteen cases of scarlet fever, all were positive. Furthermore, there was no blanching in erysipelas.

Thirteen cases were treated with the serum, and in ten of these, intramuscular injections of single doses of 40 to 60 c.c. were followed by prompt and complete recovery within from 12 to 24 hours. In two extremely toxic cases the administration of larger amounts in divided doses was followed by rapid and striking improvement with complete recovery by 36 hours after the initial injection. One case with septic complications died, although the rash subsided promptly following administration of the serum.

The analogy to diphtheria is striking. If this experimental work is put on a practical basis—and there seems to be no reason why it should not be—we will in all probability, in the short space of a few months, have added to our armamentarium practical biologic methods not only of diagnosticating and treating scarlet fever, but of testing susceptibility to it and actively immunizing against it. This will unquestionably rank with the discovery of insulin as one of the great achievements of our generation.

SPECIALISM VERSUS COMPETENCE

It is not uncommon, in these days of modern medicine, to hear the present, with its rapid succession of spectacular achievements, compared not unfavorably with the medicine of a past generation. We take pride, and justly so, in the numberless important advances that have been made in the last half century. Chemistry and bacteriology have opened up new and constantly ramifying paths that were hitherto unheard of; technique in various lines has been industriously exploited, and public health, the infant of our calling, has become Gargantuan in its growth.

The past is often pleasanter and always easier to recall than the future is to view. The run of mortals, on attaining a little eminence, are content to rest and look upon the levels they have left behind. They are satisfied with their present conquest; it is the true mountain climber who fixes his eyes on the peaks that are his goal. If we wished to philosophize a little we could imagine that this knoll, so satisfactory to us now, would be indistinguishably merged with the valley when seen from the elevations beyond.

Few of us attempt to imagine the status of our profession fifty years hence. To many of us the present only is real; the future is hidden; the past is obsolete. That the same belief was held fifty years ago and will obtain in fifty years from now does not occur to us. We live in realities and all beyond our present view does not exist. And yet the fact must be faced that the perfections of today will be the crudities of tomorrow and that our present finished structures will soon be stripped of their ornaments and serve only as the foundation stones of newer edifices.

Nevertheless, there must be a considerable degree of comfort in knowing that, while fulfilling our present destinies, we are laying the foundation stones of the future, and that our works will not, like Pompeii and Herculaneum, be buried by the march of events; or, like the ancient cities of India, be taken back by the jungle. The past is linked to the future by a strong thread of truth that cannot be broken and is not lost, and each of us who does his work competently and measures its worth accurately is adding a strand to the thread.

This development of methods, and particularly this elaboration of technique has increased the knowledge that must be used today—regardless of its worth tomorrow—to such an extent that few can comprehend adequately more than a small part of it. From this has risen our present-day specialism, which is almost comparable to an organization of expert technicians. Thus the pediatrician, and the pediatrician only, may presume to regulate the infant's diet; the roentgenologist must interpret the x-ray film; the laryngologist must view the vocal cords, and the gynecologist has claimed for his own the contents of the pelvis. Each has staked his claim and none may trespass. The surgeon and the internist have divided the body anatomically, and the pediatrician has lopped off a segment of the span of life.

We are living, if we may use a trite expression, in an age of specialism. Technique of manipulation and technique of thought have allowed certain individuals to attain their maximum development along certain lines, and their trespass in other lines, if they dare trespass or are interested in so doing, is viewed with apprehension and with some resentment.

With this specialization, however, are we not losing to a considerable degree our professional competence? Are we not losing sight of that fundamental thread of truth that gives us a perspective of the real value of our work; that enables us to consider our patient as an individual and not a pathological unit of a human body or a representative of an age group? Is not the pediatrician a more useful member of society if he knows well the conditions in old age that had their beginnings in infancy, and will not the laryngologist have a better understanding of the patient with tuberculosis of the vocal cords, if he has also a better understanding of the many other manifestations of the disease?

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Legislative Matters

SHALL CHIROPRACTIC BE RECOGNIZED IN MASSACHUSETTS?

THE hearing on House Bill 746, providing for the licensing of chiropractors, was conducted by the Committee on Public Health at the State House, Wednesday, March 5, 1924.

The interests of the proponents were cared for by the Hon. A. G. Buttrick acting as counsel, who conducted his part of the hearing in a dignified manner. Petitions with four or five thousand signatures were submitted. The people advocating chiropractic recognition were not bitter or denunciatory. They submitted testimony indicating belief in cures of backache, neuritis, femoral hernia, ear ache, kidney troubles, kidney stones, ulcer of the stomach, sleeplessness, appendicitis, epilepsy, and that typhoid fever, pneumonia, and other diseases of equal severity recover in half the usual time under chiropractic treatment. One witness felt that the fountain of youth had been found in chiropractic. One reported that he had been given up to die but is now in better health than ever before, and several were saved from impending surgical operations or recovered after unsuccessful operations by the employment of chiropractic treatment. Much of this testimony applied to the alleged benefits resulting from chiropractic treatment in Massachusetts, and the honorable counsel for the proponents requested the committee to refrain from asking for the names of the chiropractors, for the information would furnish evidence which might lead to the prosecution of these people. The committee evidently did not intend to introduce any embarrassing features, and refrained from all attempts to secure this very important information. Here was seen a part of a body of representative persons hearing evidence of illegal practice in the State for which they have the responsibility of making the laws, and who are in part successors of that body of persons that did make laws which provide that chiropractic treatment by unregistered physicians is illegal.

Some of the questions propounded by one member of the committee and his subsequent comment showed that he at least was committed to the side of the proponents if any way could be found to give them legal recognition without disrupting the present laws.

The opposition was conducted by Dr. John L. Sutherland, who explained the features of the bill which are open to criticism. He had arranged for speakers representing the hospitals, medical schools and medical societies, but the committee found so much of interest in the remarks of Dr. John W. Bartol that they suggested different topics for discussion, and he was kept on his feet so long that only a very little time remained and only a few could be heard.

One speaker representing the osteopaths brought out the injustice of letting in the chiropractors through special legislation after the State had adopted the single standard and obliged the osteopaths to qualify under the same conditions required of all practitioners. He felt that chiropractic is a poor imitation of osteopathy, and since the State had dealt with that phase of medical practice it would be illogical to open the question at this time.

It was brought out that the first law recognizing chiropractic was enacted in Kansas in 1913, and since that time twenty-six other States have provided for registration of these practitioners.

Massachusetts and Rhode Island are the only New England States that have not given recognition to this cult.

The objections to the bill as formulated by the Joint Legislative Committee of the Massachusetts Medical Society and the Massachusetts Homeopathic Medical Society are as follows:

1. All persons who attempt to heal the sick and restore health should first demonstrate to some competent authority their familiarity with the human body in health and in disease: and their ability to diagnose diseases and comprehend disease processes.

2. Disease processes are the *same* whether the sufferer is under one form of treatment or another. Whatever the form of treatment, the human body and its diseases remain the same.

Therefore the practitioner should know the causes and the courses of diseases.

3. We propose "one minimum standard of qualifications for all who practice the *art of healing.*"

4. There is no need whatever of establishing extra licensing and examining boards.

The fundamental medical sciences are broad enough and big enough to support any system of healing. Therefore one examining board is enough. Two boards will needlessly complicate administrative machinery and will also mean *two standards*, and thereby lead to trouble and undesirable notoriety, such as a neighboring State (Connecticut) recently has had.

5. There would seem to be no necessity for the State to recognize "Chiropractics" as a separate and distinct division of the medical profession.

6. The petitioners ask for the privilege of examining applicants in the sciences of "Anatomy, Histology, Physiology, Chemistry, Pathology, and in hygiene, sanitation, and symptomatology." These subjects the present Board of Registration include in their examinations, and the Board is competent to examine applicants therein.

7. In the opinion of the protestants there is no need of the proposed legislation.

8. Applicants ask for legal recognition as a separate and distinct medical fraternity, with *standards admittedly lower* than those not in force for the medical profession; and at the same time they claim superior powers in diagnosing and treating diseases. . . . The prestige connected with securing the enactment of the proposed Bill 746 is an enviable thing, and would unquestionably prove of great service in establishing the new practice and increasing its popularity.

It is well known that a licensed masseur can apply the chiropractic thrust, so called, if he does not diagnose or prescribe. The chiropractors are not satisfied with the opportunity to give sufferers the specific treatment. They want to be known as specialists in the practice of medicine without devoting the necessary time and effort needed in meeting the present legal requirements. In other words, they want to be given a key which will open a side door to the field of medicine.

If the people of Massachusetts have any convictions on the subject there is abundant opportunity to so inform the Legislature. The chiropractors have the endorsement of thousands. Do all intelligent citizens care to submit their views?

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PERCENTAGE OF BLIND PUPILS DUE TO OPHTHALMIA NEONATORUM.—The percentage of blind pupils in the Perkins Institute and Massachusetts schools for blind for the year 1922-23 is 18.9, but among the new admissions the percentage dropped to 9.3.

Miscellany

ANNUAL MEETING OF THE AMERICAN SOCIETY FOR THE CONTROL OF CANCER

AT the annual meeting of the American Society for the Control of Cancer, whose headquarters are at 370 Seventh Avenue, New York, on March 1, interesting reports were made by representatives from different parts of the country on the educational campaign of the past year, and the program which the Society proposes to carry out during the next year was announced.

The society possesses a chairman in every State, every Province of Canada and the Island possessions. These chairmen have committees and there are sub-committees under them, so that the entire territory is covered by a volunteer administrative organization.

Up to the present, the chief effort of the society has been to educate the public to suspect the existence of cancer when the symptoms which everyone can detect make themselves evident and to go immediately to a competent physician and follow his advice. In propagating this doctrine, the usual methods of publicity which are employed by volunteer public health agencies have been used.

In future the society intends to develop its national office as a center for the collection of information concerning the prevention and cure of cancer and the amelioration of the suffering of incurable cases. It will promote the idea of cancer clinics when established under proper auspices. Encouragement will be given for the collection of more accurate statistics in regard to the prevalence of cancer and the relative value of different methods of treatment. It is intended that a special effort shall be made to have medical students obtain a better knowledge of cancer than they appear heretofore to have received. Practicing physicians will be assisted to acquire greater skill in the early diagnosis of cancer.

The financial condition of the society is satisfactory, so far as the present year is concerned, and confidence was expressed that there would be no lack of money for the future. The members look forward to a permanent existence for this organization. They hope to secure a large endowment. Already the society has been the recipient of various bequests, the interest upon which adds materially to the annual income obtained through memberships and grants by financial foundations.

During the last year the society has issued 2,750,000 circulars of information for the general public, has prepared a large colored exhibit of interesting and attractive pictures, with text, for meetings of medical societies and health shows, and has thoroughly revised the two major publications called "What Everyone Should

Know about Cancer," and "Essential Facts about Cancer," for the medical profession. These handbooks are now issued in attractive form as to binding, type, size of page, and arrangement, and may be had in limited number upon application.

The society's moving picture for popular use has had a wide showing. A copy has been available in every State and Province. Radio talks and newspaper articles by physicians of skill and prominence have been a feature of the educational work. There is now being prepared a moving picture film intended especially for physicians, with the idea that it will be shown at meetings of state, county, and other medical societies, and attract the attention of that considerable body of practitioners who have been long out of college and who neither read the journals nor take other active steps to keep abreast of the times.

The attitude which the society holds with respect to curative measures continues to be conservative and in favor of those procedures which have the best scientific and reliable foundation. Whereas it is intended that every helpful fact with regard to cancer shall be turned to account for the prevention of suffering and death by this disease, the method which the society regards as most frequently available is surgery. Radiation by means of radium or x-rays is indorsed in those cases wherein it may be hopefully employed, either with or without surgery; but the view is held that radiation is an instrument the effectiveness of which depends upon the skill of those who employ it. Too often the public is inclined to suppose that some mysterious curative efficacy lies in radium and other measures, the character of which they do not fully understand.

Steps have been taken, and the efforts will be continued, to bring about close coöperation between departments of health and the society in distributing information concerning the prevalence, cause, and cure of cancer. Cancer clinics which place the skill of capable diagnosticians and operators within the reach of all have long been favored by the society, and a number of such clinics have already been established. The number needs to be increased. The theory upon which these clinics are promoted is that those persons who can afford to pay for skilled medical attention should do so, but that those who have not the means to pay the usual fees to experts should not be excluded from the attention upon which their lives depend.

During the last year the society has adopted a definite statement of principles and policies. Upon this its future work will depend. This statement is believed to be of fundamental importance, for it will offer material aid in maintaining a consistency and continuity of effort along the directions which the society's ten years of endeavor have shown to be desirable. It is intended that the volunteer national society, which has been established to promote the public welfare, shall not fail through lack of a steady guiding influence.

Among the new undertakings proposed is the publication of a year-book in which the advance in knowledge of cancer is set forth in an impartial and unprejudiced manner. At the present time there are nineteen national societies or institutes against cancer in various parts of the world, and no central office or bureau of information to coördinate them. It was proposed in connection with the Belgian Congress on Cancer, held last September, to form an international society to assist the work of the different organizations. The American Society for the Control of Cancer took part in promoting this project.

The treasurer's report shows that the society possesses personal property to the amount of about $85,000. It has a growing membership amounting to 2500 and an annual budget of about $59,000. It is not only the oldest, but the largest, association of volunteer workers carrying on national work against cancer to be found in any country. The officers for the coming year include Dr. Howard C. Taylor, Vice-President and Chairman of the Executive Committee; Dr. Edward Reynolds, Boston, Chairman of the Advisory Council; Drs. Clement Cleveland, George E. Armstrong, and Rudolph Matas, Vice-Chairmen of the Advisory Council; and among the members of the Executive Committee are Dr. Robert B. Greenough, Boston; Drs. James Ewing, Francis Carter Wood, George H. Semken, Haven Emerson, New York; Drs. Joseph Colt Bloodgood and Thomas S. Cullen, Baltimore. Dr. George A. Soper is the Managing Director.

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THE CHICAGO MEETINGS

SECTION OF COUNCIL ON MEDICAL EDUCATION

Session was opened by Dr. Bevan introducing Dr. Wilber, who discussed briefly the aims of the associated organizations that have been annually coming together for consideration of their mutual interests and how best to advance them, for it is only through coöperative effort that the most can be accomplished. He had noticed that of late years there has not been quite so much evidence of cocksureness in the attitude of those who come to present their ideas before the different organizations. Too positive conclusions are not desirable and there are dangers in over-standardization. What is most needed now is initiative.

Dr. Colwell, secretary of the Council on Medical Education, then presented his annual review of the Council's work. This year he dealt wholly with the question of the accommodations in A grade schools necessary to satisfy the demand for matriculation on the part of qualified students. By charts he pointed out the gradual comeback in enrollment since the low ebb during war time,—at the rate of about 1000 per annum, —to the present possibilities of enrollment of 17,955 in 70 A grade schools. In these schools this year there was room for 1219 more than were accepted. In 1920 in 66 A grade schools there was room for 2000 more than were enrolled. If the numbers enrolled in the B and C grade schools in 1923-24 were added together there would still be 280 vacancies in the possible enrollment of A grade schools. It would, therefore, appear that, given suitable preparation, there is no reason why all who desired to study medicine in 1923-24 should not have found opportunity in schools of Class A grade.

President E. D. Burton of Chicago University was the next speaker, presenting a paper on the Function of the University Medical School, which he conceived to be compassed by the thesis that the university medical school is the best type of school to train physicians for practice as well as for investigation, which is really the "breath of their nostrils." If it is true that no two cases are alike, as they come into a physician's hands, it must follow that a doctor's chief mental qualification should be an investigative disposition. Cultivation of the research spirit should, therefore, constitute a large element in medical training, and this can best be accomplished in a university atmosphere. A university medical school must be conducted in the spirit of the university at its best and of the ideals of the medical profession at their highest. The curriculum for a university medical school must necessarily provide instruction in a multitude of subjects incapable of being mastered in course, but sufficient elasticity of requirement within the limits of legal standards should be permitted so that individual inclination may be satisfied.

The aim for a university medical school teacher should be to develop the investigative spirit in the student.

Research should not be merely tolerated but should be encouraged. The discovery of facts not heretofore known must be the goal. To achieve this a scientific imagination must be developed and the habit for clear thinking must be acquired. Knowledge of the history of science is a prerequisite for all this. The place where such ideals can best be realized for the physician in the making is in the atmosphere of a university medical school, and such a school must be situated in the closest physical relation to all university activities. University endowment to the amount of something approximating $10,000,000 is probably necessary.

It must always be borne in mind that in planning the education of a physician a foundation is being laid upon which building is to continue, or should continue, throughout the professional life of the individual. The apprenticeship idea in the training of doctors has become obsolete long since. The thesis laid down by President Burton is bolstered up by the analogy of the development of an infant, who in all its early contacts with life is essentially an experimenter and a research scholar on a smaller scale. It is, perhaps, a question to what extent it is legitimate to employ such analogy, except by way of illustration, but such is the common refuge of the pedagogical expert when seeking to justify a theoretical argument. Failure to follow him in this, however, does not negative the main contention of President Burton's admirable paper, *viz.*, that the ideal setting for a medical training is in a university atmosphere from the point of view of satisfying cultural and scientific aspirations.

Dr. Bevan then cited the beginning of the Council's activities in medical educational reform as his introduction of Mr. Abraham Flexner, who contributed a paper on Medical Education in Europe and America, 1909-1924.

Mr. Flexner was the investigator whose caustic criticism of the character of a considerable part of the medical education carried on in our schools fifteen years ago has wrought such remarkable transformations. The very faults of his intellectual make-up contributed to the success of his efforts, but largely for the reason that his methods, usually more applicable to the conduct of a mercantile business than to a learned profession, were just the methods needed at the time and under the conditions. His interest in the work he undertook at that time has been kept up, and therefore his later study of the same problems carried on in 1922 made the paper he read especially interesting. Fifteen years have not taught him anything in respect to appreciation of some professional problems. He is so strongly committed to the "full time" clinical professorship idea that he is unable to grasp the fact that there may be reason in some of the objections to it.

In Europe he states that at his last inspection, two years ago, there had been no material recession from pre-war ideals, and though educational activities are carrying on under difficulties they are in a fair way to be on their old basis again. They have not made progress in increasing the practical clinical character of their clinical work.

In France, with the exception of the University of Strassburg, the French have made no recovery from the wartime depression of their scientific activities in medicine and are following the same line of teaching.

In England there are indications of change in the character of their medical teaching. The government has made an appropriation of 125,000 pounds to a Medical Research Council to subsidize research, and professional teachers are being called to chairs in the universities of London and Edinburgh. Also, an Institute of Anatomy has been founded in London.

He said in fifteen years America had made wonderful progress. No country, perhaps, had taken such long strides, but none had had so far to go. This improvement is to be noted in respect to equipment, endowment, elevation of standards, but has not been as notable in clinical teaching as in the laboratory subjects.

In spite of it all we have a long way yet to go, for there is not that uniformity of teaching in our schools that marks the foreign schools, and until we have been standardized to a point where all our medical graduates are run in the same mold we shall not attain Mr. Flexner's ideal. In the matter of preliminary education he says it is impossible to standardize entrance requirements, for it is almost impossible to say what a four-year high school course may have offered, and he defies anyone to say what two years of college may or may not mean. They are both trying to be all things to everyone. He criticises all attempts to give medical students clinical contacts before laboratory training in the fundamental sciences has been given, but makes a plea for flexibility in the curriculum.

Clinical teaching is carried on properly in this country in from six to twelve schools. When it is properly conducted there must be an abundance of clinical material under complete university control. In some places there is plenty of material, but it is not under university control, while in other places there is the control but material is insufficient. In this country the privately endowed medical schools are, as a whole, giving better instruction—the reverse of conditions obtaining in Europe.

The expense of providing proper clinical teaching in Europe is less than here because hospital clinics do not cost the university a cent over there. Secondary and college education must be reorganized in this country before ideal premedical standards can be secured.

There should be a revaluation of medical schools on the basis of their clinical facilities. It may be a generation or more before our schools can be brought up to a proper level of clinical instruction.

Closer university contacts should be provided for all medical schools. These should include physical contacts, as well as close association of the teaching staffs of university courses, and funds for the conduct of the medical school should be secured by the president of the university and the trustees, and not by the dean of the medical school. It would be greatly to the advantage of our medical teaching if it should take on a more cosmopolitan character, the professors being given opportunity for frequent travel and study in foreign countries.

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Announcement.—Dr. Simon F. Cox is now located at the Ring Sanatorium and Hospital, Arlington Heights.

BOSTON MEDICAL HISTORY CLUB

At the meeting held Monday, March 3, Dr. Albert W. Stearns spoke informally on "Suicide in Literature," illustrating his talk with books and pamphlets taken from his collection, which numbers over 700 items.

The earliest mention of suicide is in the Bible, where five cases are recorded, such a small number that we are led to infer that in those days it was relatively infrequent. Incidentally Samson's death by his own hand was the basis for many early writings, as were also the suicides of Cato the Elder and Saint Margaret (the only suicide of a canonized person), who killed herself to protect her honor.

In classical literature much is to be found on the subject, and almost every philosopher has something to say about it, so that at this period it was evidently quite common. This led to the attitude of justification, as by Roman law a person wishing to commit the act was compelled to plead his cause in court, and if he was able to convince the judge, was allowed to kill himself with poison furnished by the court. The Church's attitude toward suicide as a vice had its origin in early Christian times, when martyrdom became so popular that it menaced the very existence of the Church and had to be checked by authority. Other bases for opposition by the Church are to be found in the Tenth Commandment and also in St. Paul's advice to the jailer, when by reason of an earthquake his prisoners had escaped and he was contemplating killing himself.

For a long period following classical times little was heard of suicide in literature except an occasional account of a monk dying by his own hand, usually from insanity.

At a later period books on the subject began to appear, all still written from the ethical or moral point of view. The speaker then showed a series of books, beginning with one by Oomius (1660) containing an engraved frontispiece made up of persons committing suicide in all known ways; volumes by Robeck 1737, Moore 1790 (an encyclopedic work containing every reference in classical or other literature); German biographies of suicides by Albrecht (1794), later translated into several languages, and works by David Hume, Madame De Staël, Watts, Cooper, Hey and many others, together with sermons preached on the subject in Massachusetts churches about the year 1800. It was a common theme for university degrees, for many plays, and even for musical compositions, as shown by the speaker.

Another mass of literature is written by individuals who contemplated suicide, Chatterton, Rousseau and others. Napoleon wrote on the subject and is said to have always carried morphia with him.

The medical interest in the subject first began about 1830, and in 1840 Forbes-Winslow's "Anatomy of Suicide" appeared with a whole system of medicine upon it, examination of the circumstances of each case, time of year, etc. In 1865, eleven hundred letters left by suicides were published from the coroner's office in Paris. They are of great value, and when put into the terminology of the day give the attitude of the mind of the victims and approach our present feeling on the subject. Modern French literature is fairly voluminous, about fifty volumes being published 1870-90. In America the book published by O'Dea in 1882 is excellent and unique, as the subject has aroused no medical interest here.

In 1880 statistical works began to appear, the first being by Lombroso and Morselli, and since then much of this sort of work has continued, Hoffman being the chief American writer. Much Freudian literature has been published, and many well-known men such as Sir Oliver Lodge and Dr. Mesaryk (President of Czecho-Slovakia) have written modern treatises on different aspects of the subject.

Dr. Stearns then spoke briefly on some of the laws relating to the burial of suicides. In the third and fourth centuries the Church forbade suicide and found many ways to prevent it. By French law, as neither the victim nor his family could be punished, it was provided that the body be dragged behind a cart through the streets and then given to the vultures. As the courts were often slow in taking action, minute directions for pickling the body were given, in order that it might still be used, no matter how long the court delayed its decision. This was one of the atrocities abolished by the French Revolution. By British law the suicide's body was buried at a cross-roads with a stake driven through it to prevent its moving, the cross-road also tending to confuse the soul if by any chance it should escape from the body. Such a burial took place in Massachusetts in Colonial times, an account of which, written by John Noble, was shown by the speaker.

Dr. Isador H. Coriat read a paper on "Rabelais the Physician," stating that his idea was not to discuss the life and works of Rabelais, but to attempt to show why he wrote his two famous books. In spite of Rabelais' exalted word pictures, so often pornographic in character, we can see in his writings not only his real self, but often much of ourselves. He was a man unusually free from ordinary human repressions, who expressed his thoughts just as they came to him. He felt free to express what most people wish to conceal, and yet he had a deep seriousness underneath. "Gargantua" was primarily a satire on the political, ecclesiastical and medical foibles of the times.

The reader then discussed the psychological bases, mechanism and effects of satire, humor, and especially medical humor. He touched upon the dream-like word condensations of Rabelais, later seen in Lewis Carroll's "Hunting of the Snark" and "Sylvie and Bruno," and spoke of the unedited and uncensored mind as seen in Rabelais and at the present time in Joyce's "Ulysses" and "Portrait of a Young Man" as something from which the ordinary individual shrinks since he does not wish to recognize the fact of the existence of repressed thoughts.

He then spoke of Rabelais' wide knowledge of the medicine of his time, his translations of Hippocrates and Galen, his acquaintance with syphilis, mercurial treatment, and hysteria, and reviewed his life history. This showed that until he received his degree of M. D. Rabelais did not publish his books, which would tend to suggest that they had some relation to medicine. Moreover, from internal evidence, especially in the prologue to Pantagruel, and from the physiological fact that surprise and laughter can produce a psychic discharge, Coriat is of the opinion that the books were written with this idea in mind. Rabelais utilized all his genius to arouse laughter and surprise as psycho-therapeutic means to relieve and benefit his patients.

Dr. J. W. Courtney read an interesting original letter of Larrey, the famous French surgeon, showed a portrait of Dr. Gabriel Naudé, and the privately printed inaugural "Discours" of Buffon, Pasteur and Ampère, delivered by them on their entrance to the Institute.

A VISIT WITH DOCTOR OSLER

In 1919 Dr. Walter L. Bierring and Col. L. A. La Garde, acting as a committee sent by the National Board of Medical Examiners to visit the medical centers in Great Britain and France and attend the examinations conducted by the conjoint Board of England, took time to call on Sir William and Lady Osler. Dr. and Mrs. R. P. Strong were also visiting Dr. Osler at the time. In an account published in the Federation Bulletin Dr. Bierring, Secretary of the Federation of State Medical Examining and Licensing Boards, gives a report of this visit. Dr. Osler, then just past seventy, exhibited the most intense interest in American medicine and physicians and showed accurate knowledge of our affairs. Later visitors to Mrs. Osler since the death of Sir William have reported that she too felt the most cordial regard for the friends made while living in the States, and familiarity with changes in the medical world.

Through Dr. H. D. Arnold, Dr. Bierring was led to send in the plate from which this picture of Sir William is reproduced, with Dr. Bierring on Dr. Osler's right and Colonel La Garde on his left.

Dr. Bierring's letter is as follows:

NATIONAL BOARD OF MEDICAL EXAMINERS
Founded 1915, by William L. Rodman, M.D.

Editor Boston Medical and Surgical Journal:

My friend, Dr. Horace D. Arnold, writes me that you are interested in a picture of Doctor Osler, and would like to have a few words of explanation about the circumstances under which it was taken.

Herewith I enclose you a copy of a short article written at the time which refers to it. This picture was taken on July 30, 1919, at Doctor Osler's home, 13 Norham Gardens, Oxford. Sir William was in a happy frame of mind, and laughingly arranged the posing in the garden below the terrace, and asked Colonel Richard P. Strong of Boston, who was there that day, to take my Eastman pocket kodak for the picture. It is probably the last picture taken of Doctor Osler, because he left the next day for a long vacation at his summer home on the Isle of Jersey, not returning until late in September. A few days later he answered a consultation call in Edinburgh, and upon his return found that the railroad strike had tied up transportation beyond the English border, so that it was necessary to complete the trip by auto to Oxford, which stirred up an old bronchitis, followed by a pneumonia and empyema, from which he did not recover.

Trusting that this is the information desired, I am, with personal regards,

Very sincerely yours,

Walter L. Bierring.

FIGHTING FOR OUR RIGHTS

It has often been necessary for individuals and organizations to make strenuous efforts to modify unjust laws. Physicians have occasionally suffered because of burdensome restrictions or exactions. For example, a physician is obliged to pay a fee which is used to maintain the administration of the medical registration laws, theoretically enacted for the protection of the people. If the purpose of the law is really in the interest of the people the State should maintain the departments which have police powers. So, too, with the Harrison and Volstead laws. Physicians are taxed to provide a proportion of the revenue used for enforcement of these laws.

An appreciation of the injustice which is meted out to medical practitioners has led to the formation of an Association for the Protection of Constitutional Rights, and an appeal is now being sent to doctors for assistance in fighting these onerous laws. We are publishing the subjoined letter, so that all who feel inclined may contribute. It is a worthy object, and Dr. Lambert should be sustained in his effort.

The Association for the Protection of Constitutional Rights

Samuel W. Lambert, M.D., President
Jas. F. McKernon, M.D., Vice-President
Warren Coleman, M.D., Secretary
Frederic E. Sondern, M.D., Treasurer

59 East 54th Street,
New York

20 West 55th Street,
New York

Executive Committee

J. Bentley Squier, M.D.
Chas. L. Dana, M.D.
Wm. K. Draper, M.D.
Nathan E. Brill, M.D.
Jas. T. Gorton, M.D.

New York, February 25, 1924.

Dear Doctor:

You have probably read in the daily press or in the medical journals of the action brought by Dr. Samuel W. Lambert, President of the Association for the Protection of Constitutional Rights, testing the constitutionality of those provisions of the Volstead Act which limit the amount of alcoholic liquor which physicians may prescribe for their patients, and the opinion of the Hon. John C. Knox, District Judge, declaring as unconstitutional these provisions of that Act.

The real object of this procedure is to determine the power of legislative bodies in the enactment of restrictive laws concerning therapeutics, which may interfere with the saving and prolongation of life; thus the action is a representative one on behalf of all physicians.

Exacting legal services began in February, 1921, and must be continued for the appeal to the higher Federal Courts, and to guard the interests of the physician in the Regulations which must follow the successful outcome of this action. While the preliminary fees of counsel and other expenses have been nominal, it is now necessary to secure funds for their adequate compensation.

You will, doubtless, be glad to express your endorsement of the Association's endeavor by helping to meet these obligations. Contributors will be enrolled as members of the Association, and it is suggested that subscriptions range from $1 to $25. Please mail checks to Dr. Frederic E. Sondern, Treasurer, 20 West 55th Street, New York.

Very truly yours,
Warren Coleman, *Secretary.*

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THE GROWTH OF THE NEW YORK CITY DEPARTMENT OF HEALTH

Starting as the Board of Health, this department was organized in 1866 and has grown steadily since that time. Beginning with a very few employees the number has increased to over three thousand. The appropriation for 1923 was $5,478,000.

Fifty years ago the death rate in the city was 31. In 1923 the rate was reduced almost to 12, which is a decrease of 61 per cent. This improved condition is shown by the figures of 185,737 probable deaths during 1923 if the old rate had existed, but the actual number of deaths was only 69,452, a saving of 116,285 lives. The decrease of the death rate of children under five years of age has amounted to 81 per cent. It is claimed that this reduction in child mortality has been brought about largely by the control of communicable diseases, especially diphtheria, the use of pure milk, and the coöperation of various philanthropic organizations.

The effect of vaccination is most interesting. In the years 1871 to 1875 the deaths from smallpox varied from 32 to 124 per 100,000 of the population. Since 1882 the rate has been steadily reduced, so that since 1903 the rates have not reached over 1 per 100,000 in any year, and since 1913 no death has been reported in any year.

Typhoid fever in New York City may be justly termed the vanishing disease, for there have been only two deaths per 100,000 in each of the past five years.

In 1875, and for several years after, the death rate was high from diphtheria. In 1923 the rate was 9 per 1000 of the population. The reduction in the death rate from tuberculosis is similar to that shown by other cities with efficient health departments.

The Department expresses the belief that the improved conditions to be sought in the immediate future will be among the people of middle and advanced life.

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DIMINISHED MORTALITY FROM PUERPERAL CONDITIONS

There was a gratifying fall in the mortality from puerperal conditions among the 15,000,000 industrial policyholders of the Metropolitan Life Insurance Company in 1923, according to the January Statistical Bulletin issued by that company. The death-rate per 100,000 for the year was 17.9, as compared with 19.0 in 1922, and 23.0 in 1920. With the single exception of the year 1916, when the rate touched 17.6, the 1923 figures were the lowest ever recorded among the industrial population.

Louis I. Dublin, Ph.D., the Metropolitan's statistician, in commenting on the above figures, said:

"Diseases incidental to pregnancy and childbirth are still an important field for public health work. The mortality can be further reduced by greater emphasis on nursing supervision during pregnancy, at the time of delivery and during the immediate post-partum period. Especially encouraging are the lower death-rates last year from puerperal septicemia and albuminuria. The former in particular may be brought down still further by the closer attention of obstetricians and health officers to sources of infection."

The decrease in the death-rate from puerperal septicemia referred to was from 7.4 in 1922 to 6.9 in 1923. The death-rate from puerperal albuminuria and convulsions was 4.2 in 1923, as compared with 4.7 the previous year.

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PLAN FOR THE ERECTION OF AMERICAN HOSPITAL

As a lasting memorial to the generous sympathy of the American people to Japan at the time of the earthquake, a portion of the surplus contributed through the American Red Cross to Japan relief is to be used in the erection of a large modern hospital in Tokyo to be known as the American Hospital, for which another portion of the surplus will be set aside as an endowment fund. The suggestion of the Japanese Emergency Relief Bureau, which has been adopted by the American Red Cross, was that the $4,500,000 surplus held for Japanese relief at the Red Cross should be divided into three parts. The first $1,500,000 is to be used for immediate relief work among the yet many thousands of Tokyo's destitute people. The second $1,500,000 will be used for the erection and equipping of the proposed hospital, and the third $1,500,000 will be set aside as an endowment fund for an institution of healing, which will carry in its name the thanks of Japan for America.—*The Japan Medical World.*

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NEW ENGLAND HEALTH INSTITUTE

More than 1000 people interested in public health work will gather in Boston May 5-10, 1924, for the New England Health Institute.

What is it?

It is a study course in health work, with leading specialists as instructors.

It is under the auspices of the State Departments of Health of New England, the United States Public Health Service, Yale and Harvard Schools of Public Health, and the Departments of Public Health of the Massachusetts Institute of Technology and Simmons College.

There will be 13 sections, each holding from five to nine periods, The instructors will be men and women of experience in their respective fields.

When is it?

May 5-10, 1924.

Where is it?

Boston, with headquarters at the John Hancock Life Insurance Building.

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TOO LATE

The Essex North District Medical Society is sending to its members a request for expressions of opinion as to the question of having the annual dinner of the parent society in the middle of the day or in the evening, with the statement that the result will be submitted to the Council. The Council has voted to have the dinner in the middle of the day, and unless a special Council meeting is called and action otherwise taken the matter is settled for this year. The time for the annual dinner seems to be a question about which there are decided differences of opinion.

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News Items

Announcement.—Robert W. Buck, M.D., announces the opening of his office at 374 Marlborough Street, Boston.

Harvard Medical Society.—A meeting of this society was held in the Peter Bent Brigham Hospital Amphitheatre, March 11, 1924, at 8.15 p. m. Program: Big Game Hunting in Africa, Mr. C. P. Curtis.

Lawrence Medical Club.—The monthly meeting of the Club was held Monday evening, February 25, with W. D. Walker, M.D., at the Shawsheen Manor, Shawsheen Village. G. S. Allen, M.D., was chairman for the evening, and Henry M. Chase, M.D., of Boston, spoke on the "Significance of Hematuria." At the business meeting House Bill 1209, an amendment to the Massachusetts Medical Practice Act, was explained and endorsed.

Wachusett Medical Improvement Society.—The regular meeting was held at Holden District Hospital, Wednesday evening, March 5. Dinner was served at 7.30. Papers were read by Dr. Joseph W. O'Connor of Worcester on "The Significance of Uterine Hemorrhage in Pregnancy"; by Oscar A. Dudley, State Health Inspector, on the Schick Test; and Dr. Donald S. Adams, Worcester, on "Blood Transfusion with Demonstration."

Worcester District Medical Society.—The regular meeting of the Society was held at the Out-Patient Department of Worcester City Hospital Wednesday, March 12, at 5.30 p.m. Subject, "Cesarean Section," by Dr. William E. Denning, Worcester. Dr. Robert L. DeNormandie of Boston and Dr. J. M. Birnie of Springfield discussed the subject presented by Dr. Denning, and were followed by Drs. Rose, O'Connor, and others. Buffet lunch was served at 6 o'clock.

Springfield Academy of Medicine.—The regular meeting of the Springfield Academy of Medicine was held Tuesday evening, March 11, at 137½ State Street.

Dr. Guy LeRoy Hunner, Professor of Gynecology at the Johns Hopkins Medical School, read the paper of the evening entitled, "Ureteral Stricture in Abdominal and Pelvic Diagnosis," with lantern slide demonstration. The discussion was opened by Drs. I. N. Kilburn and W. O. Wilder, followed by others.

Nomination of Dr. Cumming.—President Coolidge has sent the name of Dr. Cumming to the Senate for confirmation as Surgeon-General.

The endorsement of Dr. McLaughlin was not effective. There were certain features of the campaign which are explanatory of his failure to secure the nomination. Dr. McLaughlin should have been appointed in the first place, and we contend that since an injustice was done he should have been appointed now.

This is no disparagement of Dr. Cumming but simple justice to Dr. McLaughlin.

Week's Death Rate in Boston.—During the week ending March 1, 1924, the number of deaths reported was 217, against 326 last year, with a rate of 14.57. There were 32 deaths under one year of age, against 55 last year. The number of cases of principal reportable diseases were: Diphtheria, 68; scarlet fever, 126; measles, 233; whooping cough, 13; tuberculosis, 33. Included in the above, were the following cases of non-residents: Diphtheria, 8; scarlet fever, 11; measles, 2; tuberculosis, 8. Total deaths from these diseases were: Diphtheria, 6; scarlet fever, 1; measles, 1; whooping cough, 1; tuberculosis, 7. Included in the above were the following cases of non-residents: Diphtheria, 1; scarlet fever, 1; tuberculosis, 3.

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Defective Vision in School Children.—According to investigations made by the National Committee for the Prevention of Blindness, based on a study of 1,194,923 children in New York State, Connecticut, and Rhode Island, about one child in every ten is handicapped by defective vision. Other investigations confirm these conclusions.

DEATH NOTICES

Dr. George Herbert Burke of Springfield died at his home in that city of a respiratory paralysis following a sore throat, on February 27, 1924. He was 39 years old, was born in Ogdensburg, N. Y., and a graduate of the Medical Department of McGill University in 1906. Then he served as chief medical officer on a large Canadian Pacific liner for three years, settling in Springfield and joining the State medical society in 1910. During the World War he was in charge of the camp hospital in Brest, France (1917-1919), and was retired with the rank of lieutenant-colonel. On his return to America he married Miss Blanche Jones of Hartford, Conn., July 30, 1919. She and a son survive him. He gave chief attention to obstetrics and was a popular physician.

Dr. Burke was a member of Springfield Post of the American Legion, Officers Reserve Corps, American Medical Association, Springfield Medical Society, Springfield Medical Academy, Springfield Lodge of Elks, Home City Council of the Knights of Columbus, Nayasset Club, Oxford Club and of the Theta Delta Chi college fraternity.

Dr. George Herbert Foss died at Springfield, February 29, 1924, at the age of 45, after a long illness. He was born in Pittsfield, N. H., February 21, 1879, his parents being George W. and Nellie S. Foss. He came of Revolutionary stock, two ancestors having served in the Colonial army. He was graduated from Dartmouth Medical School in the class of 1906 and practised in Alstead and Hinsdale, N. H., until 1914, when he moved to Springfield and joined the Massachusetts Medical Society. He had been a member of the School Board for the past six years and was a member of the Massachusetts Constitutional Convention in 1917, 1918 and 1919.

One of Dr. Foss's chief interests was physical education; on this subject he wrote short stories and did all he could to advance the cause of athletics in the public schools.

He was a member of Roswell Lee Lodge of Masons, Amity Lodge of Odd Fellows, the Massachusetts, Hampden County and Springfield medical societies, and the Physicians' Club, and was a past grand of Amity Lodge.

Dr. Foss was married to Ella N. Todd of Somerville, June 12, 1907, and they had two children, George H., Jr., born in 1908, and Robert T., born in 1918. Besides his wife and children, Dr. Foss leaves a brother, Harry B. Foss of Greenfield, a railroad engineer.

NOTICES

PRELIMINARY ANNOUNCEMENT OF THE CLINIC TOUR OF THE TRI-STATE DISTRICT MEDICAL ASSOCIATION

The Interstate Postgraduate Clinic Tour to Canada, the British Isles and Paris in 1925 is now being arranged under the supervision of the managing director's office of the Tri-State District Medical Association. The time for leaving will be about the middle of May.

The tour will consume, approximately, two months' time, and the total cost from Chicago and back to Chicago again will be less than $1000. This will include all clinic arrangements and admissions and all travelling expenses, except meals on Pullmans in America and tips on the ocean steamer. First-class hotels will be used everywhere and the ocean passage will be on the largest and finest of the new one-cabin ships.

Clinics are being arranged in Dublin, Belfast, Liverpool, Manchester, Leeds, Edinburgh, Glasgow, Newcastle, London and Paris, and other points of clinical interest. The clinics will be conducted by the leading clinicians of these cities. The opportunity will be given, subsequently, to visit the clinic centers in other parts of Europe.

This tour is open to members of the profession who are in good standing in their State or Provincial societies and their families and friends.

Sight-seeing programs will be arranged practically every day abroad, including the most scenic part of the countries visited, without extra cost.

On account of the great demand for reservations, applications should be made as early as possible to Dr. William B. Peck, Managing Director, Freeport, Ill. Preference in the assignment of hotel and steamship accommodations will follow the order in which the applications are received.

LECTURES ON TUBERCULOSIS AND INDUSTRIAL HYGIENE

The Public Health Committee of the Academy, the New York Tuberculosis Association, and the Division of Industrial Hygiene of the New York State Department of Labor have arranged for combined courses on tuberculosis and industrial hygiene for physicians, to be given at the Academy of Medicine at 4.30 on Tuesday and Friday afternoons, beginning March 14 and ending April 22, 1924.

HAVE YOU PAID YOUR ANNUAL DUES?

The time specified for the payment of Massachusetts Medical Society dues in order to maintain the right to receive the Journal has expired. The list of accredited members is now being made. As soon as that list is completed all who have not paid the annual assessment will be dropped from the list. This is by direction of the Council. After a name has been dropped the Journal cannot furnish back numbers which have been omitted. Please see that your assessment has been paid.

BOSTON TUBERCULOSIS ASSOCIATION

The Boston Tuberculosis Association, which has had its exhibit of educational material on view at the Maverick Dispensary, East Boston, will transfer it, for this week, to the Nazareth School, South Boston. To emphasize the lessons of the health exhibits the parents, teachers and scholars of the school are invited to a lecture on Thursday afternoon, March 13, at 3.30 in the afternoon. The speakers will be Dr. Edward O. Otis, chairman of the educational committee of the association, and Miss Bernice W. Billings, executive secretary. The lecture is one in a series of talks, the speakers being furnished by the lecture bureau of the association, which gives such service in the interests of health education.

COMBINED MEETING

Suffolk District Medical Society, Medical Section, in conjunction with the Boston Association of Cardiac Clinics. This combined meeting will be on March 26, 1924, at the Medical Library, at 8 p. m.

"Periarterial Sympathectomy," Dr. Arthur W. Allen.

"Sympathectomy for Angina Pectoris," Dr. Edward P. Richardson.

"Surgery in Relation to Mitral Disease," Dr. Elliott C. Cutler.

Discussion will be opened by Dr. Shields Warren, followed by Dr. Samuel Levine and Dr. Paul D. White.

Francis W. Peabody, M.D., *Chairman.*
William B. Breed, M.D., *Secretary.*

BOSTON MEDICAL HISTORY CLUB

Meeting at Boston Medical Library, Monday, March 17, 1924, at 8 p. m.

Captain F. L. Pleadwell, M.C., U. S. N.: A New View of Elisha North and His Treatise on Spotted Fever, Based on a Recently Discovered Manuscript.

F. B. Lund, M.D.: Medical Allusions from Herodotus.

Light refreshments after the meeting.

John W. Cummin, M.D., *Secretary.*

MIDDLESEX EAST DISTRICT SOCIETY

The next meeting of the Middlesex East District Medical Society will be held at the Harvard Club on Wednesday, March 19, at 6.30. Dr. Paul D. White will address the society on the subject "Heart Pain."

Allan R. Cunningham, *Secretary.*

UNITED STATES CIVIL SERVICE EXAMINATIONS

The United States Civil Service Commission announces the following open competitive examinations: Medical Officer, Junior Grade, Salaries up to $2,000; Medical Officer, Grade A, Salaries up to $3,250; Medical Officer, Grade B, Salaries up to $4,250.

Vacancies in the positions of physicians in the Indian Service, surgeon in the Coast and Geodetic Survey, physician in the Panama Canal Service for duty outside of hospitals, and assistant and associate medical officers for field work and at field stations in the Public Health Service, at the salaries indicated below, and in positions requiring similar qualifications, at these or higher or lower salaries, will be filled from these examinations, unless it is found in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

Physicians appointed under the Public Health Service for permanent local duty will be selected from registers maintained in the offices of secretaries of civil service districts.

Indian Service (*Junior Medical Officer Grade*).—The entrance salary for physician in the Indian Service ranges from $1,000 to $1,200 a year (plus "bonus," see below), with quarters, heat, and light. Employees have the privilege of boarding at the common "mess" at a very low cost. The Government furnishes all drugs and equipment and means of transportation.

Coast and Geodetic Survey (*Junior Medical Officer Grade*).—The entrance salary for surgeon in the Coast and Geodetic Survey is $1,400 a year (plus "bonus," see below), with allowance for subsistence at $2 per diem while serving on board ship, except in the Philippines, where the allowance for subsistence is $2.50 per diem. The number of surgeons in the Coast and Geodetic Survey actually employed and under pay at any time is eight. Three of these are employed in Alaska and on the Pacific Coast, four in the Philippines, and one on the Atlantic Coast and in Porto Rico. Officers serving in the Philippines are usually relieved at the end of two years. All surgeons are attached to vessels, and while their first duty is to conserve the health of the crew, it is expected that they will take part in the work of the Survey. Appointment will be confined to those who indicate willingness to accept service in any of the regions named.

Panama Canal (*Medical Officer, Grade A*).—The entrance salary for physician, Panama Canal Service, is $250 a month; promotion may be made to $275, $300, $325, and $360, and to higher rates for special positions. The salary begins on the date of sailing for the Isthmus. Employees are supplied bachelor quarters at a charge for rent, furniture, water, electric light, and janitor service of approximately $9 a month. Family quarters are supplied at a rental of $10 to $25 a month according to class, and an additional charge is made for electric current, water and fuel based on the cost of the service. Meals may be obtained at the Canal Zone restaurants on the Isthmus at about 50 cents each and upward. Vacancies in the Canal Zone hospitals are filled by the detail of officers of the Medical Corps of the Army; *openings for civilian physicians therefore occur only in the service outside of the hospitals proper and are few and infrequent.*

Public Health Service (*Medical Officer, Grades A and B*).—The entrance salary for assistant medical officer, Public Health Service, is $2,400 to $3,000 a year, and for associate medical officer is $3,000 to $3,600. Any person appointed who is not over 30 years of age may subsequently take the examination prescribed by law for the Regular Corps before he reaches his thirty-second year. Persons between 32 and 40 years of age may take the examination for the Regular Corps after they have performed five years of creditable service under their appointment as assistant medical officer or associate medical officer, as the case may be.

Range in salary.—The entrance salaries within the range stated will depend upon the qualifications of the appointee as shown in the examination and the duty to which assigned.

Bonus.—Appointees at annual compensation of $2,500 or less, whose services are satisfactory, may be allowed the increase granted by Congress of $20 a month.

Applications will be rated as received until June 30, 1924.

For further information apply U. S. Civil Service Commission.

SOCIETY MEETINGS

DISTRICT SOCIETIES

Bristol South District Medical Society:

The annual meeting will be held in New Bedford, May 1, 1924.

Essex North:—Annual meeting at Lawrence General Hospital, May 7, 1924.

Essex South District Medical Society:

March 19, 1924:—Salem Hospital.

May 7, 1924:—Annual meeting, Relay House, Nahant, in conjunction with Lynn Medical Fraternity.

Franklin District:—Society meets at Greenfield the second Tuesday of March, May, July, September. Annual meeting in May.

Hampden District:—The meetings for the year are as follows:

April, 1924, at Springfield; annual meeting.

Hampshire District Medical Society:

Meetings held bi-monthly, the second Wednesday in the month, at Boyden's Restaurant, Northampton.

Middlesex South District Medical Society:

March, 1924:—Hospital meeting; place not yet determined.

April, 1924:—Annual meeting.

Norfolk South District:—Meetings first Thursday of each month at 11.30 a. m., February, March, April and May, at United States Hotel, Boston. The February and May meetings are stated meetings.

Suffolk District Medical Society:

March 26, 1924:—Meeting of the Medical Section, in association with the Boston Association for the Prevention and Relief of Heart Disease, at the Boston Medical Library at 8.15 p. m.

April 30, 1924:—Annual meeting to be held at the Boston Medical Library at 8.15 p. m.

Worcester District:—The meetings for the year are as follows:

April 10—A public meeting.

May 8—Annual meeting.

STATE, INTERSTATE AND NATIONAL SOCIETIES

Schedule of meetings of the *New England Dermatological Society:*

Wednesday, April 9, 1924, at 3 p. m., in the Surgical Amphitheatre, Boston City Hospital.